

JUL 17 1922

# Railway Age

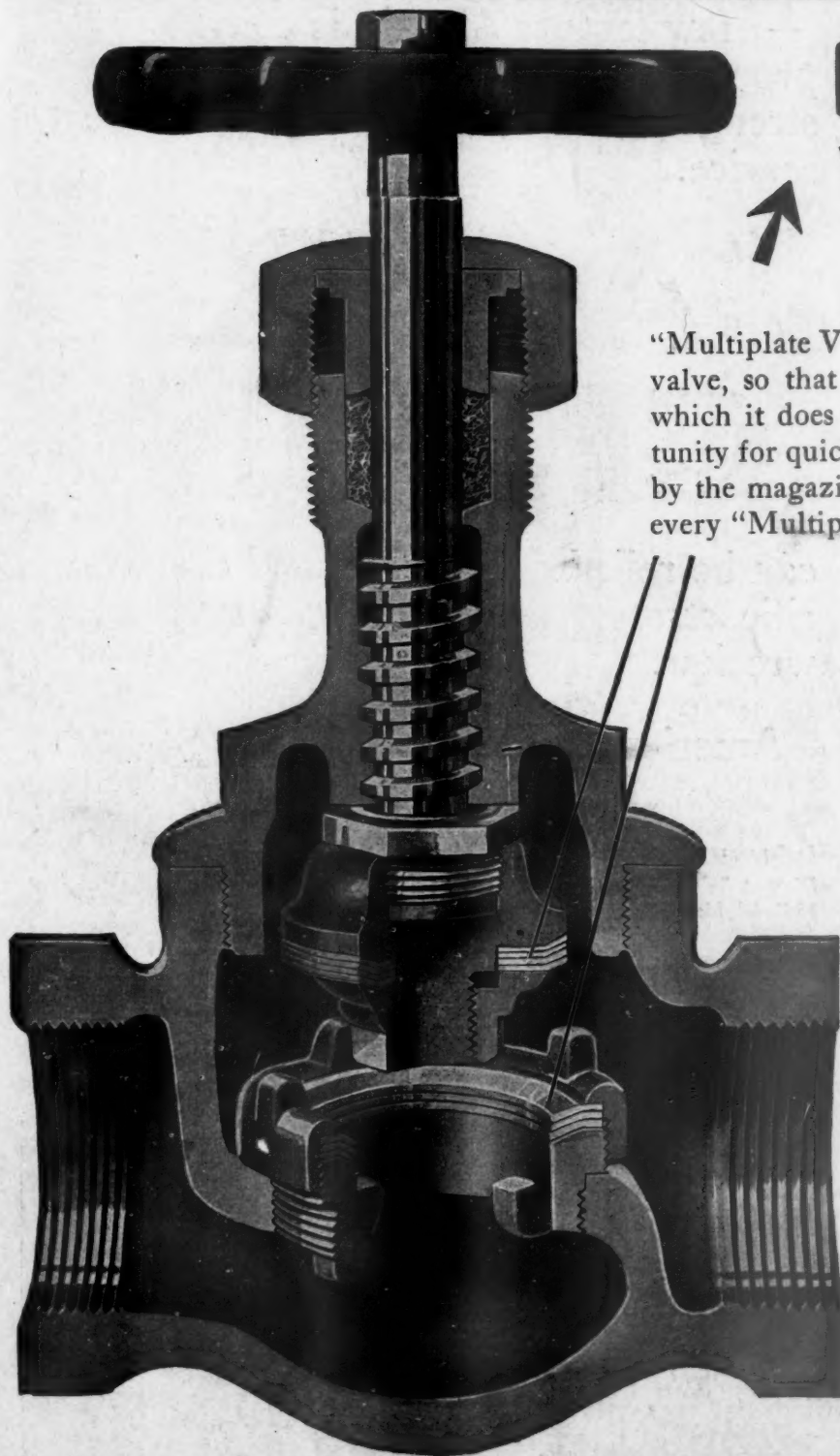
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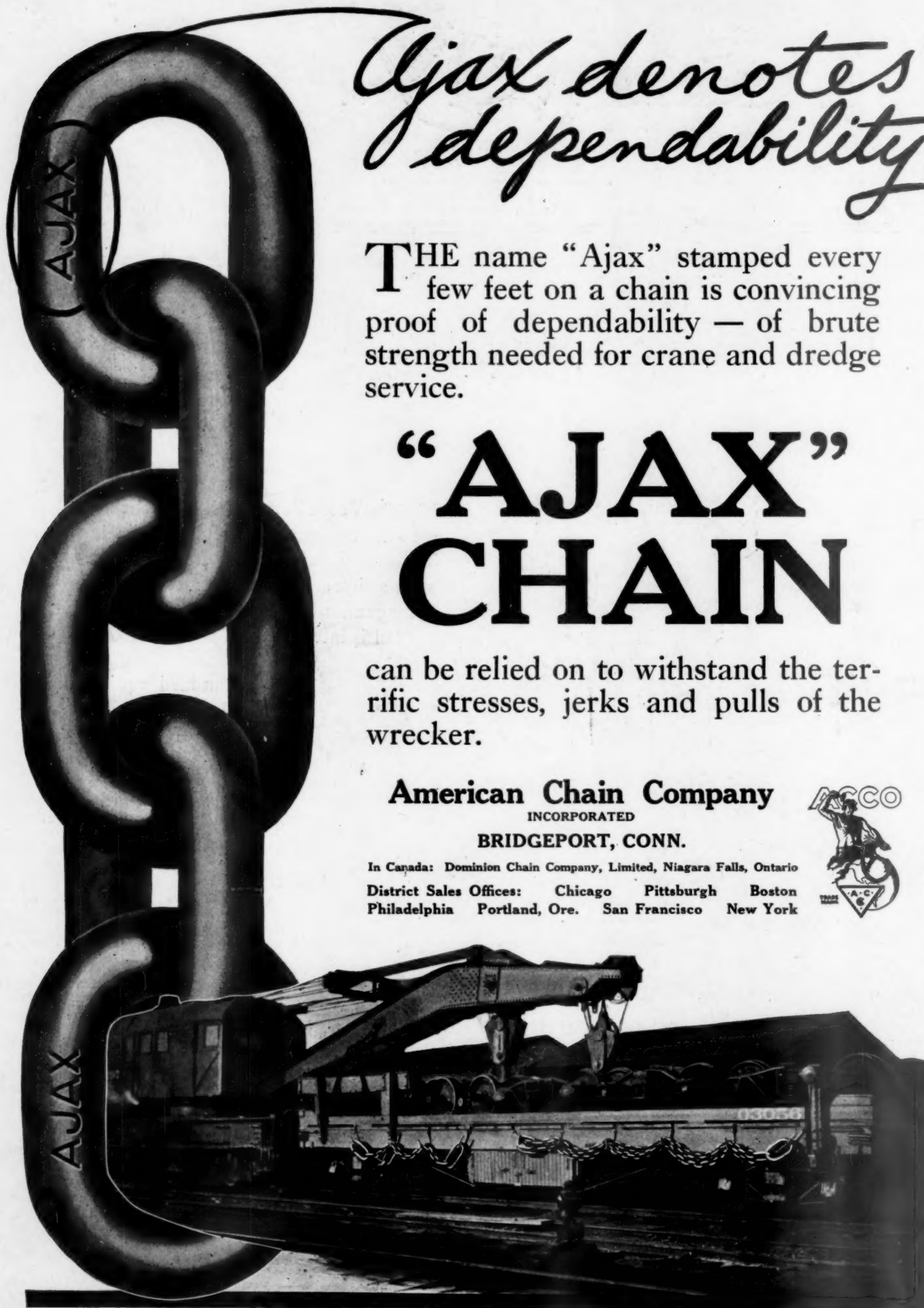
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# EDITORIAL



## Railway Age

The Table of Contents Will Be Found on Page 5 of the Advertising Section

Manufacturers frequently complain, and with much justification, that it costs more to sell shop machinery and equipment to railroads than to other industries.

### Cost of Selling Machines to Railroads

In fairness, therefore, the railroads ought to be willing to pay more. One manufacturer writes as follows: "On many lines of machinery of a new or improved type, railways should properly pay a higher price than industries because, over a long period, it is necessary to spend far more time and money to introduce such machines than it requires with the general trade. Railways figure that they are competing with no one in shop work and, therefore, do not keep on their toes in trying to cut down shop costs." Even when manufacturers can prove an operating economy for a machine, the report is that they always secure a much larger percentage of orders from the general trade than it is possible to secure from the railways. This is a severe indictment of present railroad methods and to the extent to which it is true, present methods should be corrected. It has been suggested that valuable results would follow if the responsibility of the shop managements in the way of reducing costs could be increased, at the same time granting them more power in installing efficient equipment and methods. At present, railroad supply manufacturers are compelled to interest shop foremen, higher mechanical department officers and purchasing officers in all new equipment, convincing these officers that the advantages claimed for the equipment are actual. The cost of this educational and demonstration work is high and must come out of profits on the machines manufactured. In the long run increased selling costs are added to production costs and form a tax paid by all purchasers of machine tools.

Something of a precedent in safety campaigns was set recently by two trainmen at a road crossing in Ohio, according

### Militant Safety Campaigners

to one of our Columbus friends. Two youths, accompanied in an automobile by two girls, were racing a fast freight train for precedence at the highway crossing. The motor car won, but only by an instant, and one of the girls, frightened by the approaching train, jumped from the motor car and fell between the tracks. She, too, narrowly escaped death—indeed the engineman on the freight train thought that she had been run over and stopped the train. Two members of the train crew came up to ascertain the cause of the sudden stop. The two young men, instead of showing a chastened spirit as a result of their narrow escape from death, demanded that the trainmen cut the crossing to allow the girl, who had rolled to safety on the opposite side of the train, to join them in their automobile. Instead of complying with their demands, the trainmen paired with the young men and proceeded to thrash them soundly, only desisting upon their promise never again to take such a chance with their own lives or with those of others. We cannot, of course, expect the railroads to instruct their trainmen to undertake any such extra-legal activities as the corporal punishment of those

who take chances at highway crossings. The public would, however, we think, condone such actions occasionally when they are so eminently appropriate as in this case. A better plan would be for the public authorities, assisted in detection by vigilant railway employees, to undertake the punishment of these prisoners by fine and imprisonment. Racing with trains for highway crossings is a sport, with the exultation of winning and death as the two possible results. If the winning motorists were invariably punished, the race for grade crossings would cease to be such a sport. It would be a sure thing—a fine, prison or death for the reckless driver. Thus the grade crossing race would lose its glamor and such accidents would seldom occur.

One of the most marked developments in the design of railway buildings in the last decade is to be found in engine-

### The Tendency in Engine- House Design

houses. The average building of this character erected 15 or 20 years ago is a dark, gloomy structure with practically solid walls, small windows so begrimed with smoke as to afford little light and with little or no provision for ventilation other than for the removal of locomotive exhaust through the smoke jacks. As a result, smoke hangs so heavily in these buildings at all times that it is the common practice for the workmen to carry torches with them at all times to light their paths and to provide them with sufficient illumination to perform their work. In marked contrast with such construction is the Southern Pacific's enginehouses at Mojave, Calif., and Indio, which are described elsewhere in this issue. While some features of these houses are designed to meet the local conditions prevailing at these desert locations, the extensive provisions for ventilation and for light are in accordance with modern practice. It is coming to be recognized in industry that ample light and air are conducive to efficiency. Good light will not only increase the amount of work a mechanic will turn out, but it will reduce the number of mistakes and accidents. As a step in the modernization of old buildings to conform to this newer idea, a few roads have undertaken to whitewash the interiors of their enginehouses at frequent intervals with excellent results. Of more permanent benefit is the increased attention to the problems of light and air in the construction of new houses, a subject to which too much attention cannot be paid.

The spectacular and distressing disaster at Winslow Junction, New Jersey, reported last week, will tend powerfully

### Where Speed Control Is Needed

to promote interest in "train control" as distinguished from the simple automatic stop with which we are familiar in the New York subways and the Pennsylvania Terminal. At Winslow Junction the main line is straight, and safe for 100 miles an hour, while movements to the branch must be limited



to about 40 miles an hour. "Speed control" apparatus will provide for this condition; while, if only a simple stop were to be used, every branch train would have to be brought to a stop before passing over the switch. The practical operating officer—that is to say, the consensus of operating officers' opinion as expressed recently to the Interstate Commerce Commission, and noticed in the *Railway Age* last week, page 51—hesitates to use speed control apparatus extensively until it has been more thoroughly developed; and he would bridge this gap between ideal conditions and cold actuality by making his automatic stop as simple as possible and allowing the engineman to suspend its operation at a place like Winslow Junction. This privilege of suspension is held up by the extreme idealists as a large sized bugbear; but if the engineman is compelled to get the co-operation of the fireman in every operation—as may very simply be provided for—the argument against the permissive arrangement becomes pretty weak. The Automatic Train Control Committee of the Ministry of Transport of Great Britain in its recent report, while not recommending speed control for such conditions as at Winslow Junction, says that "such cases of accidents can be safeguarded if not entirely prevented by installing a train control device either of a permanent or temporary character, which would provide an audible indication as well as a brake application, to remind enginemen of the existence of a speed restriction over any curve, crossing, etc., in advance." The arguments, pro and con, on this important point, ought to be thoroughly thrashed out.

Much has been said recently about the activity of the railways in the buying of equipment, while relatively little comment has been heard regarding the appropriations which have been made for improvements to roadway facilities.

**The Opening of Construction Work** Yet the same tendency towards increased expansion of facilities is evident here. One index is the construction news columns of the *Railway Age*, which required more than twice the space during the first six months of this year than during the corresponding period of a year ago. Even more instructive is a comparison of the projects undertaken in the two years. Over 30 individual projects, each involving an expenditure of more than \$1,000,000, have been undertaken in the first six months and more are being announced weekly. These include such work as the Atchison, Topeka & Santa Fe second track from Yampai, Ariz., to Griffith (\$6,500,000) and the Ellinor, Kan., cutoff (\$1,500,000); the Canadian Pacific pier at Vancouver, B. C. (\$2,000,000); the Chicago, Burlington & Quincy shops at Denver (\$2,000,000); the Great Northern terminal at Tenatche, Wash. (\$1,500,000); the Illinois Central third track from Matteson, Ill., to Kankakee (\$2,000,000); the Michigan Central bridge across Niagara river (\$2,000,000); the Missouri, Kansas & Texas classification yard at Denison, Tex. (\$3,000,000); the New York Central Castleton cutoff (\$20,000,000); the Pennsylvania improvements at Pittsburgh (\$8,000,000); the St. Paul Union Station, 1922 program (\$5,000,000); the St. Louis-San Francisco second track (\$1,500,000); and the Union Pacific freight station and other improvements at Denver (\$2,000,000). An even larger amount of work has been undertaken on projects of smaller magnitude. In the aggregate the improvement and betterment work already authorized and undertaken this year involves an expenditure of more than \$150,000,000, exclusive of the passenger terminal at Cleveland and the Illinois Central terminal at Chicago which have been authorized and for which plans are being prepared, and the Union Station at Chicago, on which several million dollars will be spent this year.

## Significance of the Shop Crafts Strike

THE STRIKE of railway shop employees is, we believe, unprecedented in one respect. It directly involves more employees than ever were previously involved in any railway strike in this country. There were about 475,000 employees in the shops when the strike order went into effect. Estimates of the number who quit work differ; but a large majority quit.

In other respects the strike is similar to those which have preceded it. Like most other strikes, it was the result of a difference of opinion between managements and employees concerning the rules under which the employees should work and the wages they should be paid. Unlike other strikes in this country, it disregards decisions made by a government arbitration body regarding the matters in controversy, but strikes in disregard of decisions of government arbitration bodies have not been unknown. Australia and New Zealand have tried compulsory arbitration. It has resulted in peaceful settlements when the decisions have been against the employers, but repeatedly has resulted in strikes when the decisions have been against the employees.

Differences of opinion between employers and employees regarding how much the latter should be paid have arisen throughout the history of the wage system. Innumerable plans for so settling them as to prevent resort to lockouts and strikes have been advocated and tried; but no such means has ever been successful long. The employer is prone to underestimate the amount he ought to pay; but public opinion and law can compel him either to pay what a government tribunal holds just or go out of business. Employees, individually and collectively, are equally disposed to overestimate what the employer can afford to pay; but up to the present time public opinion and law seldom have succeeded in forcing them peacefully to accept wages that they have really regarded as too low. They often have been forced to accept lower wages than they demanded, but the only really effective compulsion has been that of economic conditions.

Regardless of the employee's opinion of what he ought to have, he cannot by the strike or any other means long exact more than the employer can afford to pay. In the controversy preceding the present strike the labor leaders contended that the railways should be required to pay an average wage of \$2,637 a year because the employees need this much to support their families according to a certain standard. But, hard as it may seem to say so, the wages any industry can afford to pay never have been and never will be determined by what its employees need. What any industry can afford to pay out is determined solely by what it can earn. A business concern can stop operating just as its employees can stop working. A business concern not only can but must stop operating if for any considerable time it is forced to incur expenses which exceed what it can earn. It is more difficult for a railway than any other kind of business concern to stop operating, because to do so is to forfeit its right ever to do business again. Already, however, many small railways in the United States have been forced to stop operating by inability to earn enough to pay their expenses.

If the demands made by the leaders of the railway labor unions should be complied with, either an enormous advance in rates would have to be made, or every railway company in the United States would have to stop operating. The public would not pay any such advance in rates. It has successfully insisted upon a reduction of rates. A reduction of wages was inevitable. The shop employees refused to accept it. There was presented such a situation as has developed in industry over and over again. It had the same result that it has so often had—a strike. The decisions and mediation of the Railroad Labor Board made no difference.

Will this always be the course of events in future? The



labor leaders doubtless will answer that it will be as long as the wage system exists. The more radical among them would avoid the development of similar irreconcilable differences, and the resulting lockouts and strikes, by abolishing "capitalism"—which is another name for private property—and the wage system with it. They would have all the means of production and distribution owned by the public and managed by the workers under some guild or soviet plan. But would that prevent the workers from demanding more than industry could produce? The soviet system has been adopted in Russia; but the workers in Russia still have to live on what industry can produce. It does not produce as much as it did before the hated capitalist and wage systems were abolished, and therefore the workers have to live on less. The proletariat are supreme in Russia, but the incomes of the workers are not based there any more than anywhere else on what the workers need or demand. They need and demand more than is required to keep them from starving; and yet thousands and even millions of them are starving. Economic laws cannot be repealed by strikes or revolutions, although many labor leaders convince their followers they can be. What men need and what they can get can be made equal only by increasing production enough to make what they can get equal to what they need.

There is being fought out in this strike not only the age long issue between employer and employee, but also the equally venerable issue of law and order versus violence. The law says that every man has the right to work without interference from other men. It is just as much a crime to threaten or assault or murder a man for the purpose of keeping him from working as it is to threaten or assault or murder him for the purpose of robbing him. Strikes such as this are accompanied by what is euphoniously called "peaceful picketing." The picketing is peaceful until some men try to work under the conditions or for the wages against which others have struck. Then the pickets usually begin to "persuade" them not to work by beating, stabbing, or killing them. The present strike has reached this stage. In every part of the country attacks by strikers upon men who have tried to work have been reported. The strike leaders constantly express pious hopes and wishes that there shall be no violence. Most of them are undoubtedly sincere; but the outrages continue. This raises squarely the question whether the public officials who have sworn to enforce the laws have the disposition and power to do so. It raises squarely the question whether the forces of law and order are stronger than the forces of lawlessness and disorder. Usually the forces of law and order have triumphed in this country. When violence begins in a strike it almost invariably indicates that the strikers are losing ground and know it. It began early in this strike.

The situation in many respects is tragic. It is depressing to realize that after all the progress which has been made in increasing the efficiency of industry it is still impossible to pay a large part of the workers wages sufficient to enable them to live in reasonable comfort. It is hardly less depressing to realize that most working men are so ignorant and badly led they are unaware that this condition is at least as much the fault of themselves and their leaders, as it is of the system of industry against which they inveigh and which many of them would like to overthrow. It is easily conceivable that with modern methods and machinery labor and capital could so co-operate as in a short time to secure an increase of production which would enable the average worker to receive the equivalent in necessities, comforts and luxuries of the \$2,637 a year of which the labor leaders talk. Shortcomings of human nature, which vitiate both labor and management, prevent it. If labor and capital would both use as much skill and energy in increasing production as they do in fighting over the division of what is produced, the problems of both would be largely solved.

It is also depressing to recall all the efforts that have been made to devise means of peacefully settling the differences that arise over the division of what is produced and then contemplate the situation now existing in the United States. Business conditions of other kinds have improved so much that, except for the coal strike and the railway strike, the total production of necessities, comforts and luxuries in the United States undoubtedly would be greater today than it ever was before. These two strikes, however, which are the results of efforts to settle by force what ought to have been settled by reason, already have prevented a normal and even more than normal increase of production.

Congress, in adopting the labor provisions of the Transportation Act, tried to establish a means of peacefully settling railway labor controversies and of substituting in this field, at least, the rule of reason for the rule of force. But human nature cannot be changed by legislative enactments; and the country has upon its hands this shop men's strike. But the laws of economics are still in operation and cannot be repealed either by statutes or by force. Increased efficiency in production can enable industry to pay wages of much greater purchasing power. Nothing else can. Strikes interfere with increased production, and, therefore, in the long run hinder increases in real wages. As long as there are labor unions that are led by and composed of men who would rather carry on propaganda and strikes than help increase the efficiency of production, we shall continue to have strikes and most labor unions will continue to be agencies not for enabling higher wages to be paid, but for making their payment more difficult.

### Standardize Traffic Signals

THE "CAREFUL CROSSING CAMPAIGN" inaugurated by the American Railway Association should assist in reducing the heavy toll of life taken in highway crossing accidents, which are increasing so rapidly. The principal benefit from this campaign will be derived from educating the public through the intensive publicity campaign. However, the greatest benefits from such movements will not be derived until traffic signals are standardized nationally and a safety first movement is started by the various automotive societies along lines similar to those of the railroads. Such a movement means public education. The American Railway Association, through its Signal section, has yet to standardize the automatic highway crossing signal and this work is now well under way.

It will devolve upon automotive societies, the International Traffic Officers Association and other bodies to standardize or harmonize other traffic signals with long standing recognized practices. For example, red is universally recognized to represent "danger" in navigation and on the railroads, but it is also used to indicate "safety" in marking exits in public buildings and other places. The use of red in automobile tail lights has resulted in accidents (as pointed out editorially in the *Railway Age* for January 4, page 166) which otherwise would have been prevented if indiscriminate use had not been made of it. Therefore it is to be hoped that the meeting which was held in New York on May 23, under the auspices of the American Engineering Standards Committee, at the request of the Illuminating Engineering Society and International Traffic Officers Association, and looking to greater public safety through the standardization of colors for traffic signals, will produce results.

At this meeting A. H. Rudd, chief signal engineer of the Pennsylvania, representing the Signal section of the American Railway Association, recommended that (1) red be used for stop everywhere, such as at highway crossings with railroads, in fixed signals and in the hands of traffic officers at street intersections, at the ends of streets and possibly to

indicate excavations in the streets, unless qualified by a more favorable indication; (2) yellow for tail lights of automobiles, possibly for excavations in streets and for calling policemen or for any other purpose where caution is required, possibly at busy street intersections to indicate that the traffic lights will be changed from red to green or from green to red, and (3) green lights for fire escapes, for proceed at street intersections and other purposes to indicate the way is clear. These recommendations should form a good basis for the standardization of traffic signals. The sooner these signals are standardized and safety first campaigns for the public inaugurated the more quickly will regrettable highway crossing accidents be reduced to a minimum.

## Freight Rates 6.9 Per Cent of Wholesale Value

**A**LTHOUGH THE arguments often used by shippers and politicians in demanding reductions in freight rates would seem to indicate an impression that rates are the most important factor affecting prices and the general state of prosperity or depression, the findings of the Joint Commission on Agricultural Inquiry just reported to Congress show the exact contrary as to rates in general.

For 1920 this report shows that the total freight revenue of all the railroads in the United States, \$4,435,911,000, was only 6.9 per cent of the estimated wholesale or factory value of products of manufacture for that year, which was \$62,500,000,000, and that "the freight revenue shown includes not only the transportation of raw materials of every kind handled but also the cost of transportation for final distribution to ultimate point of consumption." In other words, while the figure for the total retail value of the products of manufacture was not available, the total amount of the freight rates paid to the railroads was known and it constituted only 6.9 per cent of the wholesale or factory value. Therefore, it is plain that the freight rates must have been a still lower percentage of the prices paid by the public.

The freight revenues of the railroads in 1900, the report shows, amounted to \$1,049,256,323, which was 9.2 per cent of the value of products of manufacture; in 1910 the freight revenues were \$1,926,940,028, or 9.3 per cent. Therefore, the wholesale value of products in 1920 had experienced a much greater increase by 1920 than had the freight rates. The freight revenues for 1920, however, were the result of eight months under the rates as established by the Railroad Administration and four months under the advanced rates authorized by the Interstate Commerce Commission on August 26, 1920.

At another point in the report the proportion of freight to the value of goods transported is estimated at about 6.05 per cent, based on the census figures for 1914. In this calculation the total production of agricultural, manufactured and mineral products is added to the imports from which is made an estimated deduction of these same articles which do not move by railroad transportation. The estimated total value of \$33,298,000,000 for that year, divided by the total railroad tonnage, 1,094,000,000, gives an average value of \$30.40 per ton, while the average freight revenue per ton was \$1.84.

The Congressional commission has compiled a large amount of data to show the economic relationship of freight rates to the prices of agricultural products and it urges reductions in these rates on the ground that they "bear a disproportionate relation to the prices of such commodities." Its comparisons of rates and prices for agricultural products, however, are based on the prices actually paid by the wholesaler and are more important in indicating the relation of

the freight rate to the amount received by the farmer than the relation of the freight rate to the price paid by the public. The commission finds, however, that "reductions in rates upon the articles of higher value, or upon tonnage moving upon so-called class rates are not warranted, while the rates upon agricultural products and other basic commodities remain at their existing levels." It also finds that "freight rates on highly fabricated articles of wearing apparel, such as boots, shoes, dry goods, men's and women's suits, etc., are not a material factor in increasing or reducing prices of these commodities."

"Higher freight rates are not infrequently urged as an excuse for increases in prices without justification," the commission says. "While freight rates are often a considerable factor in the cost of distribution of low-priced, heavy tonnage commodities and may restrict the radius of distribution thereof and sometimes even prevent shipment altogether, as a rule freight rates have not kept pace with increases in the prices of such articles as dry goods, boots, shoes and other highly fabricated articles usually purchased in less than carload quantities and do not restrict or diminish the movement of such commodities. The amount of freight in the average purchase of dry goods is so small it is difficult to show it."

The report emphasizes the statement that because the prices of farm products had fallen after freight rates had been advanced, "the farmer is suffering from a 72-cent dollar," measured by its purchasing power in terms of transportation. But the same table in the report that is used to illustrate this shows that for seven years before the decline in prices of farm products the purchasing power of the farmer's dollar, measured by the amount of transportation it would buy, ranged from \$1.01 to \$1.89, so that for that period the railroad dollar would buy less of farm products.

## Farmers and Railway Public Relations Work

**E**VERY RAILWAY EXECUTIVE in the country should read and reflect upon the letter from C. B. Hutchings, traffic manager of the American Farm Bureau Federation, which is published in the "Letters to the Editor" department of this issue of the *Railway Age*. This paper has often expressed the opinions, first, that the future of the railways will be determined by public sentiment, and, secondly, that the class of our people whose sentiment will play the greatest part in determining it are the farmers. While most business men will join in every agitation for reductions of rates, most of them are strongly opposed to every form of state socialism and will always be found arrayed against government ownership of railroads and measures which plainly tend to bring it about. On the other hand, there is a great deal of radical sentiment among the working men in cities largely because most of them are not property owners and do not clearly see how the overthrow of the institution of private property would be directly injurious to them. It is to be feared the resolutions adopted by the American Federation of Labor in favor of government ownership of railroads over the opposition of Samuel Gompers himself express the real attitude of most of the wage earning population.

The farmers are not only the largest single class of our people, but also much the largest class of property owners; they hold the balance of power. They have principally determined the policy of railway regulation followed in the past. The importance of securing a sentiment among them in favor of fair and reasonable regulation and against government ownership is, therefore, apparent.

How is this to be done? The answer may be inferred from Mr. Hutchings's letter. The managements of the rail-



ways must be made to understand better the farmers' problems and needs, and the farmers must be made to understand better the railways' problems and needs. Beyond any question there is great misunderstanding on both sides now. The welfare of the railways demands that their managements take the initiative in removing the causes of these misunderstandings. It is a most significant fact, as Mr. Hutchings points out, that when representatives of agriculture, industry and transportation, under the auspices of the Joint Commission of Agricultural Inquiry, sat down around a table and discussed matters of mutual interest they were able to reach agreements upon almost every question under consideration. This was the case because the facts about the situation of each interest were clearly and fully presented by its representatives to the representatives of each of the other interests. As Mr. Hutchings says, "reasonable-minded men will always conform to the facts."

If all the farmers, business men and railway men of the country could be made to know and understand the facts about one another's businesses a fairly harmonious sentiment among them could be secured. But the problem of placing needed information in the possession of all of them is vastly more difficult than that of placing it in the possession of a few men sitting around a table. And yet that is a problem which must be solved if the relations between the different industries and between each of them and the government are to be made satisfactory and healthy. The railways will never do the part of this work that they ought to do until they collectively and individually adopt and carry out plans as large in their scope as the importance of the object to be attained.

With respect especially to the relations of the farmers and the railways nothing could be more certain than that there is among the farmers a vast amount of hostile sentiment toward the railways. This is partly due to the fact that the railways never have done as much as they should have to help the farmers solve the farmers' problems. It is also due to the fact that for years interested persons have disseminated misleading and downright false propaganda against the railways among the farmers, and that railway officers have not done enough to nullify its effects by taking directly to the farmers the facts about the development and management of the railways. Every man who has thoroughly studied the history of and the current data regarding our railways knows it is not true that as a whole they are overcapitalized or inefficiently or dishonestly managed, that they are earning excessive returns, or are charging higher rates than their operating expenses make necessary. Nevertheless, there are literally millions of farmers who believe that not only some but most railways are grossly overcapitalized and inefficiently or dishonestly managed, that they are earning or are "guaranteed" excessive returns, and that their rates as a whole are higher than conditions warrant.

The *Railway Age* has no doubt that this sentiment among the farmers could be remedied by constant, simple, direct and adequate presentation of the facts about the railroad business to them. The railways should spare no effort to get the point of view of the farmers and their organizations and should be influenced by it. At the same time, they should spare no effort to give the farmers their point of view, and without any doubt the farmers will be influenced by it. Nothing would contribute more than this toward the solution of both the farmers' problem and the railroads' problem.

LAST YEAR the total value of supplies bought for Pullman cars was \$1,310,283.34, or 4.11 cents for each passenger carried, according to recent figures compiled by that company. During the year 113,640 gal. of liquid soap and 2,531,808 cakes of soap, 1,035,925 towels, 2,587,536 boxes of matches and 64,755,000 drinking cups were used on the cars. Laundries washed 214,870,412 pieces of Pullman bed clothes, towels, etc., during 1921.

## Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

### Farmers and Railway Public Relations Departments

CHICAGO, ILL.

#### TO THE EDITOR:

I have read with a great deal of pleasure Samuel O. Dunn's address on the Railway Situation, delivered at the annual meeting of the Railway Accounting Officers Association at Cleveland on June 7. The part of the address in which I am particularly interested is that in which he speaks of the necessity for public relations work on the part of the railroads.

The longer I have to do with the relations of railroads and their customers the more I am convinced that a large part of our difficulties consist in the fact that one side does not realize the conditions surrounding the other. The farmers today are grievously at sea in regard to the true facts of the railroad situation, and the railroads, in a very large measure have not realized how serious was the disease which had attacked agriculture and business. The plain truth of the matter seems to be that each party to the argument has failed to see the necessity for telling the other the real facts about his problem.

As you know, the Joint Commission of Agricultural Inquiry has approved the establishment of public relations divisions on the part of the railroads. Without considering where the fault lay in the past our present railroad difficulties can largely be solved if adequate work along this line is done. As one of the staff of the Joint Commission, I sat for weeks around a table where representatives of agriculture, industry and transportation met to discuss the report, and while some of our discussions were lengthy it is nevertheless a fact that upon only one subject did we fail to reach complete agreement. This agreement was possible because the facts had been fully told and reasonable minded men will always conform to the facts.

When this report was submitted to a second and wholly different body of representatives of agriculture, industry and transportation, an agreement was reached upon this problem although the second body was unable to agree upon two other questions, but when such an agreement can be reached upon 40 or 50 recommendations it is not too much to say that the solution of the whole problem lies in an adequate understanding of the facts.

I am vitally interested in this subject and hope that the *Railway Age* will continue to promote the establishment of such departments.

C. B. HUTCHINGS,

Traffic Manager, American Farm Bureau Federation.

THE STATE OF MICHIGAN has filed 31 suits against 11 railroads to recover \$200,000 claimed to be due in fees and penalties for failure to pay the statutory fee for the right to issue securities. There is a law providing that utilities obtaining permission of the Michigan Utilities Commission to issue securities shall pay the State a fee of one-tenth of one per cent of the value of the securities to be issued. Certain railroads have gone to the Interstate Commerce Commission for the approval of their issues and have ignored the Public Utilities Commission.

# Violence on Western Roads, Quiet in the East

Carriers Securing New Recruits to Take Place of Strikers—  
Serious Interruptions on But Few Roads

**R**EPORTS of rioting, slugging, bombing, and arson have featured the past week in the shopmen's strike in the West. In six states it has been necessary to mobilize troops for the protection of property and employees who are remaining on duty or who have been recruited for service by the railroads. In many instances it has been necessary to dispatch these troops to points where civil authorities have confessed their inability to maintain peace. Injunctions restraining the strikers from interfering with the operation of railway shops or with the men obtained by the railroads to operate these properties have been issued by federal courts



P. & A. Photo

**Signalmen Not to Strike—Their Chief, D. W. Helt (Center), Talking with Messrs. Hooper (Left) and McMenimen of the Labor Board**

throughout the country. Innumerable instances of attempted intimidation have been reported, these attempts being directed not only at workmen but at the troops which have been called to protect various shops. Despite all of these developments, however, there has been a slow but steady resumption of repair work on many roads with the aid of loyal employees and new workers who have been brought into the shops, in several instances under the guard of troops, to take the places of the strikers.

## Disturbances on the C. & A.

The walkout of the shop craft employees was, as a rule, conducted in an orderly manner and in the days immediately following there was little disorder. Sporadic outbursts occurred now and then but they were so isolated as to be negligible. Picketing was resorted to by the strikers at practically all points, but this too was, as a rule, orderly. The first serious disturbance was reported when the Chicago & Alton shops at Slater, Mo., were seized on July 5 by strikers who drove 25 non-union men from that town on July 4 and 18 on July 5. Union officials stated that the non-union men were placed on trains and sent from the town. Other reports declare that the non-union men were merely driven from the shops and that they left Slater voluntarily. Chicago & Alton officials stated that three guards employed by the railroads at the shops had been arrested by local authorities and placed in jail, and that the railway property was without protection of any sort. On July 6 the Chicago & Alton appealed to

Governor Hyde for protection, and on July 7, state troops were mobilized and held ready for call.

Immediately following the Slater outbreak, strikers on the Chicago & Alton at Bloomington staged a demonstration. Little damage was done but the civil authorities found themselves unable to cope with the situation, and troops were requested by both city and state officers. Five units of state troops were later dispatched to Bloomington and had the situation in hand until the importation of strike breakers on July 11 occasioned another outbreak in which shooting and slugging played a large part.

The uprising spread rapidly through Illinois, and on July 7 a group of strikers in Aurora escorted a number of workers sent from Chicago to work in the Burlington shops at that point to the city limits. On July 6 a cordon of several hundred men surrounded the Wabash shops at Decatur, Ill., in violation of a restraining injunction, in an attempt to intimidate those still at work. Two guards at the shops were beaten when they attempted to prevent strikers from interfering with workers in the shops. Troops are still held in readiness to move there if further trouble breaks out.

On July 8, the importation of workmen led to a demonstration at Clinton, Ill., in which stones were thrown at the workmen by the striking Illinois Central shop men. Armed guards opened fire on the strikers. One striker was shot



P. & A. Photo.

**Troops Patrol Yards at Clinton, Ill.**

and his son killed by a stray bullet. State troops were immediately requested.

Arson followed mob violence on July 7, in Chicago, when after a night of rioting at the Burnside yards of the Illinois Central, a box car was burned in the yards. Police report that the car had been soaked with oil and fired by strikers. Two attempts were made on the night before to set fire to the homes of workmen.

The hiring of men by the various roads to replace the strikers resulted in further outbreaks. On July 8 four men were reported killed in the disorders. By this time, the situation had become so serious in Illinois that the Chicago, Burlington & Quincy applied for injunctions to restrain picket-

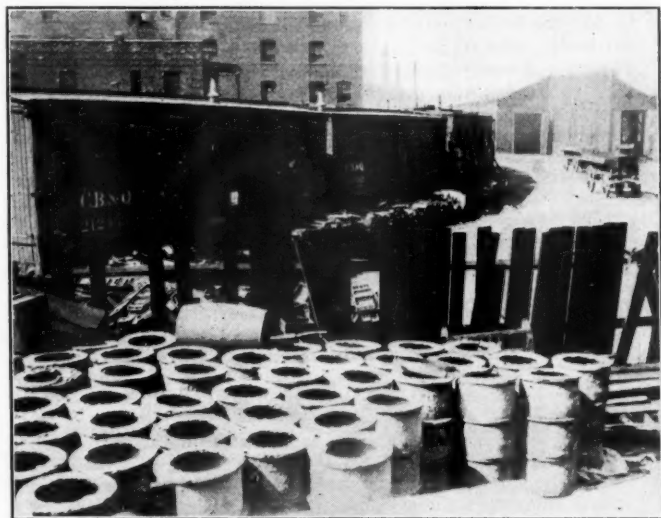


ing by strikers at the various towns along its lines. This example was followed by the Chicago & North Western, the Chicago & Alton, the Illinois Central and numerous other roads. These injunctions were granted by the courts.

### Curtailment of Service

Neither traffic disturbances nor curtailment of trains have been general. The Missouri, Kansas & Texas is reported as having discontinued the operation of 47 local trains in Missouri, Kansas, Oklahoma, and Texas. Lack of proper protection for workers, and the possibility of damage to equipment, was given as the cause. The Chicago & North Western has withdrawn 14 trains, it is reported.

A majority of the roads had issued ultimatums to their



P. & A. Photo

### Kitchen Cars to Feed New Employees

striking employees, setting a limit after which, if they did not return to work, they would lose their seniority and pension privileges. These were followed by a rather slow filtering back of strikers, but not to any appreciable extent.

### The Situation on Individual Roads

The following reports of conditions on various western carriers are indicative of the strike situation in that territory:

Approximately 4,900 employees in the locomotive department and 3,138 employees in the car department of the Missouri Pacific are on strike, according to B. F. Bush, president of that road. A total of 522 men in the locomotive department and 450 in the car department—loyal employees and new men—are now in service. "So far traffic has not been affected," Mr. Bush reports. "Some disorders have been reported at smaller points but nothing serious has happened. Recent injunctions and other activities on the part of state officers should make the situation more favorable." Mr. Bush also reported that 15 foremen returned to work at the Little Rock shops of that road on July 11 and that more were expected later.

J. M. Kurn, president of the St. Louis-San Francisco, reports that the general shop labor situation on that carrier is very much improved. "We are hiring new men daily and a few old men are returning to service," Mr. Kurn said, "There has been no curtailment of passenger trains and none in contemplation. Our passenger trains are running practically on time and we are handling a heavy freight business without very serious delay. Our coal supply is adequate. We have secured an injunction in Missouri yesterday restraining strikers or their sympathizers

from picketing or interfering in any way which might tend to hamper the operation of our trains."

On July 11, the situation in Bloomington, Ill., became more serious. In that city the enginemen, firemen and other train service employees became restive because of the patrolling of railway property by state troops and appealed to their organizations' leaders who in turn, it is reported, requested permission of their international president to refuse to operate all trains, with the exception of those carrying mail, in troop-patrolled territory.

Violence during the day was sporadic and in few cases of serious character. At Newcastle, Cal., several sticks of dynamite were used in an attempt to blow up a large water tank on the Southern Pacific and at scattered points throughout the country violence was used in driving replacement men from their work.

Of the roads centering in Chicago the Erie has filled its ranks and is hiring no more men. The Chicago, Milwaukee & St. Paul which lost approximately 16,000 men and has recruited 1200 men is operating full train service without disturbances.

The Chicago & Alton has recruited 300 men to take the place of the 2,500 who went out. It is operating trains with little difficulty although it has had much trouble with interference of strikers at various points in Illinois and Missouri. The Chicago, Burlington & Quincy has 1800 out of a normal complement of 14,000 shopmen at work.

The Illinois Central, has approximately 8,000 at work out of a pre-strike force of 12,000 men. Traffic is unaffected and no serious disorders have been reported up to the present.

The Chicago Great Western has 550 men out of a normal



P. & A. Photo

### Military Supplies Ready for Shipment to Scenes of Violence

force of 2,100 at work and is having no difficulty in operating its trains.

The Santa Fe reports 1600 men at work at its Topeka shops on July 10, while 200 men returned to work on the following day.

### Mobilization of Troops

Conditions became so serious throughout the country late last week that repeated calls for state troops led to mobilization in six states. The only troops on active duty, however, are those in Illinois and Missouri. State aid in Illinois has also been extended through the utilization of United States marshals and their forces. United States Marshal Levy of Chicago was given unlimited authority by Federal Judge Carpenter of the United States District Court at

Chicago to deal with the situation in Illinois. Marshal Levy has blanket authority to swear in as many deputies and to spend as much money as he considers necessary to maintain law and order.

Judge Carpenter pictured the federal court as the "last bulwark between the people and Communism, Bolshevism, and anarchy," in granting this authority for the swearing in of deputies by the marshal.

## The Strike Situation in the East

**W**HILE THE shopmen's strike situation in the west has been somewhat complicated by acts of violence which in some cases have necessitated the calling out of state troops, in the east this has been a minor factor and only sporadic outbreaks of an unimportant nature have occurred. In general the situation in the east shows a progressive and material improvement. The railroads primarily by hiring new men have replaced the strikers to a considerable extent, some, of course, having had much better success than others. Few roads have been able to bring their forces entirely back to normal although some have had a large degree of success particularly insofar as concerns the men directly associated with the operation of trains. There has been in the east practically no interruption to either freight or passenger service. The Erie is the only large eastern road which has curtailed its service; it has annulled 20 suburban trains running out of Jersey City but even in this case the reason ascribed by the management was the fear of a possible fuel shortage.

Practically all the roads report that they have had good success in securing new men to take the places of the men who had answered the strike call. They have advertised for men and have continued to receive applications for employment in large number. The men are said to be competent and experienced to a far greater percentage than might have been expected under such circumstances. Many of them have been recruited from ship yards and similar employment. The New Haven has received the co-operation of manufacturing industries in its territory. New men, if competent, are guaranteed permanent jobs. A number of roads have sought to enlist college men who are now on their summer vacations.

Most of the roads have announced that the strikers have been taken off the payrolls and that they can return to work only as new men. Some put this announcement in the form of an ultimatum or invitation setting a certain date beyond which the men would lose their rights. Some of the roads have had a number of the strikers return and have taken them on as new men, this being the case particularly on the Pennsylvania and Long Island which two roads were not parties to the Labor Board's decision which resulted in the strike call.

The strike, insofar as the eastern roads are concerned, has been comparatively free from violence of a serious nature. Guards are a familiar sight at all railroad centers. There have been instances of intimidation. Cases have been reported here and there of guards or strike-breakers being beaten up and occasionally rocks have been thrown at men and even at trains.

Another feature of the second week of the strike has been the contracting of locomotive and car repairs with outside shops. One instance is that of the Erie which has made a contract with the American Locomotive Company to have 25 locomotives repaired per month at the latter's Cooke Works at Paterson, N. J. for a period of six months. The labor forces are at present trying to prevent the carrying out of the work.

An order sent out by A. J. Berres, secretary-treasurer of the metal trades department of the American Federation of Labor, on July 12 instructed members of all unions affiliated with that department that no further repair work will be authorized on locomotives coming from railroads on which strikes are in progress to outside shops employing union labor.

The following items give a résumé of the situation as it exists on a number of the eastern roads. Most of the roads, it will be noted, report an improving situation and practically all advise that passenger service continues to be operated on schedule and freight service without interruption:

### BALTIMORE & OHIO

C. W. Galloway, vice-president in charge of operation advised under date of July 11 as follows:

"The strike situation on the Baltimore & Ohio today shows substantial improvement compared with July 1, when 73 per cent of the shop employees went on strike. Since the holidays many old employees have returned and including 2,000 new men employees 7,350 men are working, equal to 35 per cent of the force employed on June 30. It has not been necessary to close down the shops at any point except the big rebuilding shops at Cumberland and Pittsburgh which we have not tried to open.

"Only a few minor cases of strikers attacking workmen have occurred.

"There has been no curtailment to passenger train service, the performance gradually improving. There are no restrictions against the acceptance of freight of any class and perishable, live stock and food stuffs are moving according to schedule. There has been some slowing up in the movement of slow freight."

In his report Wednesday of the situation on the Baltimore & Ohio Mr. Galloway said:

"The only situation that is causing any trouble is in northern Ohio and northern Indiana, where the strikers have interfered with the operations at Willard and Garrett on account of the lack of protection on the part of the local authorities at these points, and in this particular section certain of the passenger service will be discontinued until the authorities can guarantee protection to our employees, who are willing and anxious to work.

"In some other sections passenger train service will be curtailed as a result of the acute coal shortage, but this will be minimized so as to create the least public inconvenience."

The Staten Island Rapid Transit, the Baltimore & Ohio's New York terminal and suburban line on Staten Island, reports that from 60 to 70 per cent of its shop employees are at work. The number is 260 men including 30 strikers who have returned and about 20 men who did not go out. The normal force is 340 men. It also reports that there has been no interruption to traffic.

### BANGOR & AROOSTOOK

The chairman of the Federated Shop Crafts on this road was in Chicago all of the week before the strike at the same time that the road's general manager was there at the hearing before the Labor Board, and made several appeals to Mr. Jewell and Mr. Franklin not to call the strike on the Bangor & Aroostook because the men did not want to go out and were satisfied with conditions, but these appeals were made in vain and he was told that the men would either have to go out or lose their union cards.

About 80 per cent of the men affected answered the strike call. The road reports a steady improvement since the strike began. On Tuesday of this week 148 men were working or 38 per cent of the normal force; 11 strikers had returned. Passenger and freight service is normal.

### BOSTON & ALBANY

Conditions are reported as improving each day. The road has had no interruption to freight or passenger service.

### BOSTON & MAINE

On July 10, 45 per cent of the men were working including new employees. Three of the shops were practically closed at the outset and the road concentrated its efforts on locomotive terminals and inspection points. Three important shops are now working with substantial forces. There have been some isolated cases of violence. Service is normal and the situation as a whole is reported by the company to be showing steady improvement.



## BUFFALO, ROCHESTER &amp; PITTSBURGH

The number of men at work is 68 or 6 per cent of normal, and none of the strikers have returned. Service, however, has been handled without interruption and the situation is reported as improving.

## CENTRAL OF GEORGIA

The Central of Georgia has 652 men working or 30 per cent of its normal force. No strikers have returned to work nor have any more employees left service. The situation is reported as unchanged.

## CENTRAL OF NEW JERSEY

This road on July 5 had 821 men at work which force it increased to 1,400 men on July 6. The latter figure is 30 per cent of the normal force of 4,746 men. On July 11 the percentage had risen to 35 per cent. Since the beginning of the strike the road has had 25 per cent of its strikers return. Service is reported as being handled without interruption.

## DELAWARE, LACKAWANNA &amp; WESTERN

This road is operating its through and suburban passenger service as well as its manifest freight service on schedule and has suffered no interruptions to its other freight service. Its

Cooke Works, Paterson, N. J., of 20 locomotives per month for a period of six months. The labor forces are now trying to effect a cessation of work at the locomotive plant insofar as repairs to these locomotives are concerned.

## LEHIGH &amp; NEW ENGLAND

On July 11, the Lehigh & New England had 44 shopmen and laborers or 13 per cent. There has been a gradual improvement in the situation due to the employment of new men.

## LEHIGH VALLEY

This company was operating on July 12 with shop crafts' forces about 28 per cent of normal, i. e., with 1,532 out of a pre-strike force of 5,573. The road has not suffered from violence and is moving its trains, passenger and freight, according to schedule and without interruption. None of its shops have been closed and 123 strikers have returned to their posts during the week ended July 12.

## MAINE CENTRAL

This company on July 12 had 462 shopmen at work, which represents 30 per cent of those at work on June 30. Of this total 252 were old employees and the remainder recent acquisitions. Since the beginning of the strike a few new employees and a few old employees who did not heed the strike call on July 1 have left the service. The road has closed none of its shops but work at Waterville is practically at a standstill. No violence has been reported and there has been no interruption to either passenger or freight traffic. The situation in general shows improvement over the preceding week.

## NEW YORK, NEW HAVEN &amp; HARTFORD

On the New Haven the number of men who went on strike totaled 6,139. The road has been able to report a progressive and steady improvement day by day since the beginning of the strike. A statement issued under date of July 7 said "Conditions have improved each day and skilled mechanics and others have been placed in the positions formerly occupied by men now on strike. Recruiting of desirable mechanical experts continues as rapidly as applicants can be examined and arrangements made for placing, and large numbers of applicants continue to appear. Manufacturers and other industries have patriotically proffered assistance in supplying men in the skilled trades. The company reiterates that qualified men of good habits and character who accept service at this time will be regarded and treated as permanent employees."

On June 11 the company reported that it had a force of 3,200 men or 50 per cent of its normal force. A statement issued by the management on the same day said in part:

"Conditions on the New York, New Haven & Hartford this morning have improved materially over any previous day."

"A large number of skilled mechanics and also a large number of laborers have been employed at the rates awarded by the Labor Board to permanently fill positions formerly occupied by mechanics and laborers on strike. The personnel of the mechanical department is, with the assistance of loyal and patriotic manufacturers and industries, being built up on a firm and lasting basis. There have also been a number of the men out on strike who have returned to duty as new men upon coming to a realization that the strike is not against the railroad individually but against the constituted government of the United States."

"This morning there is an increase of approximately 250 skilled mechanics over the force working on the first shift yesterday."

"There has been no interruption to freight or passenger service, which continue to be operated on a normal basis."

The New Haven reported on July 6 that it had closed a contract with the Keith Car & Manufacturing Company, Sagamore, Mass., for the rebuilding of 6,000 bad order freight cars. In explanation it further said: "At various times in past years when bad order cars have increased beyond normal, the excess have been sent to the Sagamore plant. There are a large number of additional cars awaiting repairs so that this arrangement will not affect the running of this company's shops on a normal basis and the giving of continuous employment to those now in or who may be taken into the employ of the company. It is the program of the company to give preference to its own shops in currently performing the normal amount of this work."

The New Haven also reported on Wednesday that "three trains of the larger locomotives have been forwarded to the shops of locomotive builders for general repairs and more are lined up



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## A Question Bound to Arise Sooner or Later

situation is reported as improving rapidly, large numbers of competent new employees being hired to fill the places of the strikers. The round-house forces at Hoboken, Secaucus and Port Morris are now filled out to normal. The walk-out at the Scranton locomotive shops, and the Kayser Valley car shops was complete and these shops are practically idle. The situation at the Kingsland, N. J., shop is in somewhat better shape.

## ERIE

The Erie is one of the few roads in the East which has had to curtail its train service. Effective July 10, 20 suburban trains operating out of Jersey City were annulled although the reason assigned was that the step was taken for fear of a possible fuel shortage. The Erie's contractors now have 41 per cent of their normal forces at work and 225 strikers have returned to duty. Among the several interesting features in the Erie situation is that it has made a contract with the American Locomotive Company for the repair at the latter's

to follow so that there will be an adequate supply of power at all times to meet the requirements of the service."

#### NEW YORK, ONTARIO & WESTERN

This road reports that it has had no interruption to train service either passenger or freight.

#### NORFOLK & WESTERN

The Norfolk & Western on Tuesday had 1,243 men at work, 12 per cent of its normal force. Since last week it has lost 76 additional men. The road has had no interruptions to passenger service. Freight service has been interrupted, but not to a substantial extent. The situation as a whole is designated as "slightly improved."

#### PENNSYLVANIA

On July 11 the Pennsylvania had 41,000 shopmen working out of an average week day force reporting in normal times of approximately 55,000. The road reported that it had gained 4,100 men actually working this week. It has no shops or enginehouses closed down anywhere on the system and has not had since the strike began. Nor has it had any interruption to its train service either passenger or freight. The general situation on the Pennsylvania has been showing material improvement every day.

On the New Jersey grand division the condition has improved to the extent whereas 2,000 men went out originally, 1,500 or 1,600 new men have been hired to take their places. The most essential classes are rapidly reaching normal. On the New York division, including Meadows shops, more than 1,000 new men have been taken on. One agency in New York hired 145 new men Tuesday morning.

The Pennsylvania's power house at Long Island City which supplies power to the Pennsylvania's New York electric zone and to the Long Island has been one of the central points of attack on the part of the labor forces, but thus far without success on their part. The first trick at the power house has a normal force of 90. On Tuesday morning the number of men at work was 122. The Long Island, like the Pennsylvania has had no interruptions to service.

#### PHILADELPHIA & READING

The Reading has not been affected by the strike.

#### RICHMOND, FREDERICKSBURG & POTOMAC

Practically all of the shopmen who were members of the federated crafts ceased work on July 1. Up to the early part of this week the road had employed almost 150 new men or 20 per cent of its normal force. Traffic is being handled without interruption. As compared with last week the situation is reported as "stationary."

#### SEABOARD AIR LINE

This road has only about two per cent of its men working. All its shops are closed. There has, however, been no interruption to passenger service. The situation continues about the same as in the early part of the strike.

#### SOUTHERN RAILWAY AND OTHER SOUTHEASTERN ROADS

In the Southeast some of the strikers have returned to work, but on most roads the percentage has not been very large and there was no general movement to return on Monday as had been expected in some quarters. As a result, there has been some slowing up of freight movement, but comparatively little interference with traffic. Some local trains have been withdrawn. The Southern Railway has not withdrawn any passenger trains and perishable freight trains are

moving currently, while the movement through some of the principal terminals has been very large. The Southern has issued no ultimatum to the men setting a date by which they must return to work and it is understood has made no effort to replace those who went out for the present. On the Norfolk & Western about 700 clerks out of 3,000 went out on strike after the shop men went out. The Alabama & Vicksburg secured a restraining order against interference with its men at New Orleans. Some of the lodges of the trainmen's brotherhoods in the Southeast have notified men who have been promoted to official positions but who still retain their membership in the organizations that if they perform any of the work of the men out on strike they will lose their insurance, seniority and other rights in the organizations.

#### WASHINGTON TERMINAL

Officers of the Washington Terminal Company last week, when the semi-monthly pay day came around, indicated their attitude toward the strikers when they refused to accept payments to the employees' relief fund tendered by the men who



Photo by Keystone

#### Helping to Keep the Trains Running—a New Employee of the Pennsylvania

had gone out on strike on July 1. They took the ground that since the men had left their jobs they were no longer to be considered employees of the terminal. Officers of the machinists' union said they had instructed their attorneys to make efforts to force the railroad authorities to accept the payments.

#### WESTERN MARYLAND

The situation during the second week of the strike remains unchanged. The road advises that it has all the employees necessary. The Western Maryland has contracted all repair work and the contractors did not lose any men following the announcement of the strike call.

## Developments at Chicago and Washington

### D. W. Helt Agrees to Withhold Strike Order

INsofar as the Railroad Labor Board is concerned, two of its members, Ben. W. Hooper, chairman and one of the three public representatives, and W. L. McMenimen, one of the three representatives of labor on the Board, have devoted a good deal of their time during the past week to inducing the leaders of the other organizations which have threatened to strike to withhold their strike orders.

After conferences between these two members and D. W. Helt, president of the Brotherhood of Railroad Signalmen of America, the latter announced that he would withhold strike orders for the members of that organization

pending the carrying out of a program being drafted by a committee of its officers. For the time being at least this action ends the possibility of the addition of signalmen to the ranks of the strikers.

The program determined upon by this committee was announced on July 11 by Mr. Helt and included the following provisions:

*First:* To instruct our general system committee on each carrier to take up promptly with the management all the grievances and controversies outstanding between the members of our organization and the carriers for the purpose of negotiating speedy adjustment, the matters to be taken up, among others, to embrace a revision of the recent-wage decision of the Labor Board, certain



changes in our rules, the elimination of the four cent inequality, and the method of determining rates of pay as applicable to signalmen and signal maintainers with less than four years' experience.

That the carriers could not well hesitate to consider a revision of the wage decision is indicated by the fact that some of them have already granted more favorable rates than those authorized by the Board in Decision 1074.

*Second:* In case of a failure to secure from any carrier fair and reasonable concessions in regard to the various matters involved, to bring these matters before the Labor Board with the assurance that they shall be given the right of way for prompt consideration and decision.

*Third:* To continue work under the present wage decision of the Labor Board under protest pending the efforts to obtain a satisfactory adjustment.

*Fourth:* To insist that any revision of wages obtained be made retroactive to July 1.

*Fifth:* To withhold strike order pending the carrying out of the foregoing program.

"With the best interests of the members of our organization at heart, we believe that this program should be followed prior to resorting to more drastic action," the announcement added.

The conferences which resulted in this action and in the similar action of E. F. Grable, president of the United Brotherhood of Maintenance of Way Employees and Railway Shop Laborers, reported in last week's *Railway Age*, have not been made public and the arguments by means of which these two labor leaders were induced to withhold their strike orders are not known.

Plans were made by these two members of the Board to hold similar conferences with E. H. Fitzgerald, president of the Brotherhood of Railway and Steamship Clerks, Express and Station Employees, but the latter declined to meet them and efforts to reach Mr. Fitzgerald were futile. This move on the part of the clerks' leader, together with the tenor of his remarks at the Board's inquiry on June 30, indicate according to observers of the strike, that on certain roads at least the clerical forces will soon join the striking shopmen in an effort to tie up transportation.

### Board Upholds Right of Employees to

#### Refuse to Do Strikers' Work

Two resolutions holding that the carriers have "no right to require an employee to perform work outside the scope of the existing agreement or decision of the Board covering the rules and working conditions of the class to which such employee belongs unless the employee performs such work voluntarily," were adopted by the Board during the past week. The first resolution refers to employees who are members of the United Brotherhood of Maintenance of Way Employees and Railway Shop Laborers and was handed down as the result of a protest by Mr. Grable, the president of that organization, who contended that members of his organization were being asked to perform the work of striking employees of other classes.

The second resolution referred to the employees who are members of the American Train Dispatchers' Association and the Railroad Yardmasters of America and was handed down as the result of protests registered by J. G. Luhrsen and J. L. Eldridge, presidents of these organizations.

"The observance of the policy here recommended will be conducive to the peaceful and uninterrupted operation of the carriers at this time and will enhance harmonious cooperation among all classes of employees after the strike is terminated," the last resolution of the Board added.

### The Labor Board's Call for Conferences

On July 12 it became known that Mr. Hooper and Mr. Jewell and other leaders of the Six Shop Craft organizations now on strike had participated in a series of conferences, the first of which was held on July 8. Referring to these conferences Chairman Hooper said: "Too much significance need not be attached to the fact that I have held conferences with

Mr. Jewell and the head of the several organizations. In the meantime I have also conferred with several railway executives. As a result of these conferences there are no optimistic predictions to make. My participation in the previous conferences has been personal rather than official and arose from a desire on our part to be as helpful as possible in the present situation."

Mr. Jewell also stated that: "A conference between certain members of the Labor Board and officers of the organizations of employees now on strike was held in which the issues involved were discussed. There are no optimistic or definitely hopeful results to announce at this time."

Reports being circulated as a result of these conferences indicate that the provisions under which it may be possible to end the present walkout include, first, an agreement to end the practice of contracting; second, an arrangement for modifying certain working rules which reduce the overtime pay of shopmen; third, the granting of assurances to Mr. Jewell that his organization will not be denied a re-hearing by the Labor Board on the wage issue, and, fourth, an agreement to establish the boards of adjustment provided for in the Transportation Act.

The report also indicates that Chairman Hooper has not receded from the Board's contention that the shopmen must return to work before they can expect further consideration before that body. It is questionable, according to observers, whether any "assurances" which might be given unofficially by Chairman Hooper would give Mr. Jewell material with which he could justify to his members a return to work. It is also pointed out that the contract "grievance" has already been practically eliminated through the statements of the carriers involved at the Board's hearing on June 30 and that the subject of wages and working rules can be brought before the Board by the employees involved at any time. Furthermore this situation has remained the same from the time the strike was called to the present.

The heads of the Train Service Brotherhoods asked for conference with the chairmen of the Regional committees created by the railways some months ago to deal with the Train Service organizations regarding working conditions. The chairmen of the Railway Regional committees are L. F. Loree, president, Delaware & Hudson, for the Eastern Region; S. M. Felton, president, Chicago Great Western, for the Western Region; W. R. Cole, president, Nashville, Chattanooga & St. Louis, for the Southeastern Region, and B. F. Bush, president, Missouri Pacific, for the Southwestern Region. This conference was held in Chicago on Wednesday and was understood to relate to charges made by men in train service that they had been asked by some railways to do work ordinarily performed by the striking shopmen.

The attempt of Chairman Hooper to bring about a conference between leaders of the striking employees came to nothing on July 12 when the Committee on Public Relations of the Association of Railway Executives virtually refused to meet the labor leaders at the present time.

### President Calls for Law and Order

*Washington, D. C.*—Following the Cabinet meeting on Tuesday, at which the strike situation and its possible effects were thoroughly canvassed, President Harding took official action to strengthen the efforts of the railroads and of the Railroad Labor Board to preserve uninterrupted transportation service by issuing a formal proclamation, signed also by the Secretary of State, directing all persons to refrain from interference with the lawful efforts to maintain interstate transportation and the carrying of the United States mails and inviting the co-operation of all public authorities and the aid of all good citizens to uphold the laws and preserve the public peace. It is understood that the administration also stands ready to back up the words of the President by the use of troops if necessary.

While not gainsaying the right of any man to leave his work or denying the right to strike, the President emphasized the idea he has expressed in several recent speeches by saying that those who choose to accept employment under the terms of the decision of the Labor Board "have the same undisputable right to work that others have to decline to work."

The proclamation was not issued until a late hour on Tuesday evening and until after it had apparently been given careful consideration. It had been announced earlier in the day that the President would have an official statement on the strike situation but the proclamation came as somewhat of a surprise as it represents the first action of its kind by a President for many years and is in marked contrast with the practice so frequently followed in the case of railroad labor disputes in recent years of calling the parties to the White House for a conference leading to a compromise. In the case of the coal mining controversy President Harding had called such a conference because there was no public tribunal charged with the function of adjudicating it but in the case of the strike against a decision of the Labor Board he has made it clear from the outset that the board speaks with the authority of the government and there has been no suggestion of a thought of any one in Washington doing anything to weaken the position of the board.

Daily reports of the strike situation on the different roads are being received by administration officials and, with the coal strike on the way to a settlement, the railroad strike is regarded as constituting the most important barrier to a resumption of prosperity unless the men who are willing to go to work can be protected from the fear of violence. Secretaries Hoover, Davis and Weeks, Attorney General Daugherty and Postmaster General Work remained at the White House for further conference after the cabinet meeting. The Postmaster General had reports regarding interference with the mail and it is understood that the participation of the Secretary of War had to do with the use of federal troops. The text of the proclamation follows:

#### A Proclamation

WHEREAS, The United States Railroad Labor Board is an agency of the government, created by law, and charged with the duty of adjusting disputes between railroad operators and employees engaged in interstate commerce; and

WHEREAS, The United States Railroad Labor Board has recently handed down decisions, on affecting the wage of the Shop Craft employees, the other declaring the contract system of shop craft work with outside agencies to be contrary to the intent of the transportation act and, therefore, that such practice must be discontinued; and

WHEREAS, The Shop Craft employees have elected to discontinue their work, rather than abide by the decision rendered, and certain operators have ignored the decision ordering the abandonment of the contract shop practice; and

WHEREAS, The maintained operation of the railways in interstate commerce and the transportation of the United States mails have necessitated the employment of men who choose to accept employment under the terms of the decision, and who have the same indisputable right to work that others have to decline to work; and

WHEREAS, The peaceful settlement of controversies in accordance with law and due respect for the established agencies of such settlement are essential to the security and well-being of our people;

NOW, THEREFORE, I, WARREN G. HARDING, PRESIDENT OF THE UNITED STATES, Do hereby make proclamation, directing all persons to refrain from all interference with the lawful efforts to maintain interstate transportation and the carrying of the United States mails.

These activities and the maintained supremacy of the law are the first obligation of the government and all the citizenship of our country. Therefore, I invite the co-operation of all public authorities, state and municipal, and the aid of all good citizens to uphold the laws and to preserve the public peace, and to facilitate those operations in safety which are essential to life and liberty, and the security of property and our common public welfare.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed. WARREN G. HARDING.

Reports of violence and interference with the mails at various points in connection with the shop men's strike caused the administration to take a more active interest in the strike situation following the return of the President and the Attorney General to Washington on Saturday and Monday. While the President had determined not to interfere with the strike itself, but to leave it to the Labor Board and the railroads, the reports of rioting and interference with mails created a situation requiring action from Washington and a formal statement indicating that the government intends to use its resources to preserve law and order was given out by Attorney General Daugherty on his return to Washington on Monday, with the approval of the President. After a conference with Alfred P. Thom, general counsel of the Association of Railway Executives, Mr. Daugherty went to the White House for a conference with the President.

Disorders and interference with mail trains by striking railroad men have resulted in several appeals to the government to afford protection. Serious charges of interference and assault and, in one case, of forcible seizure of railway employees, have caused the Post Office Department to lay the complaints before President Harding and Attorney General Daugherty. Passenger trains carrying mails have been discontinued in some instances.

According to telegrams to the superintendent of the railway mail service at Fort Worth, Tex., 26 trains have been withdrawn on different branches of the M. K. & T. All of them are railway post office trains with the exception of two, which carry closed pouches.

Z. V. Rawis, attorney for Pamlico County, North Carolina, telegraphed the Post Office Department from Bayboro that the Norfolk & Western had discontinued two passenger trains from Newbern to Oriental and that the mail service was completely paralyzed. A large portion of the mail, Mr. Rawis said, must be held over in Newbern from 16 to 40 hours, and mail on the Oriental section must lie over from 24 to 48 hours.

Mr. Rawis requested a prompt investigation and post office officials at Newbern and Oriental have been directed by the Post Office Department to report on the feasibility of installing temporary mail service between the two places, 30 miles apart.

The Post Office Department had announced on July 7 that only two cases of actual interference with the mails had been reported thus far, one at Marshall, Texas, and one at De Quincey, La. These cases were placed with the Department of Justice for prosecution. It was stated that the trouble at Chaffee and Slater, Mo., had been cleared up, according to advices received after President Kurn of the St. Louis-San Francisco appealed to the governor of Missouri and the sheriff of the county. The Brotherhood of Railroad Trainmen lodge at Chaffee wired the Post Office Department denying delay of mails at that town. Reports of delays of mails in Mississippi towns due to general strike conditions had also been sent in.

Later, on July 10, Postmaster General Work was notified by President Taussig of the Wabash of serious interference with the movement of mails, at Moberly, Mo., on Saturday night by strikers who stopped a mail train, cut the air hose and threw stones through the car windows. Eighteen railway mail clerks were taken from a train and marched to a strikers' hall and several engines at Hannibal, Mo., were put out of service by the strikers. Mr. Taussig said he had received no reply to his telegrams to the governor of the state of Missouri.

The Postmaster General issued a notice to all postmasters directing them to report to the divisional superintendent of railway mail service any acts of interference with mail movements. He also instructed the superintendent of railway mail service at Washington to have divisional inspectors sent to all points where railroads had reported disorders by strikers.



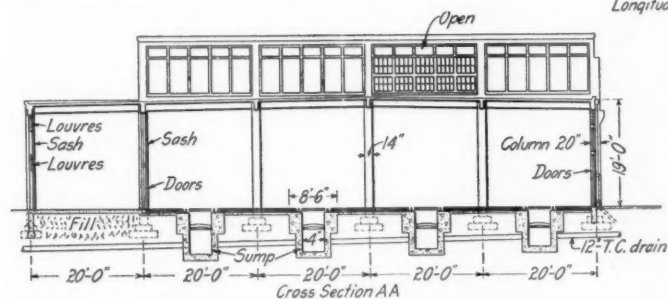
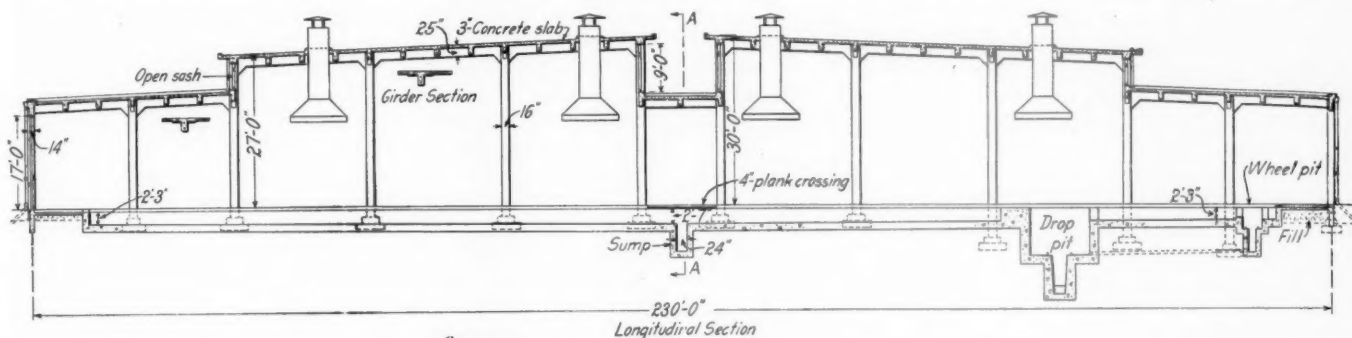
# Southern Pacific Builds Unique Engine Houses

Rectangular Concrete Structures Are Provided With Lead Tracks at Each End to Expedite Use

THE SOUTHERN PACIFIC Coast Line recently completed two concrete engine houses at Mojave, Cal., and at Indio, which embody some interesting departures from the usual types of locomotive terminal facilities. Both the houses are rectangular in plan and similar in construction

line, the movement of a locomotive into or out of the house interferes in no way with the other locomotives. The layout of the engine house site is such that space is provided for future enlargements by adding additional tracks.

The house at Indio is 206 ft. long by 80 ft. wide and has



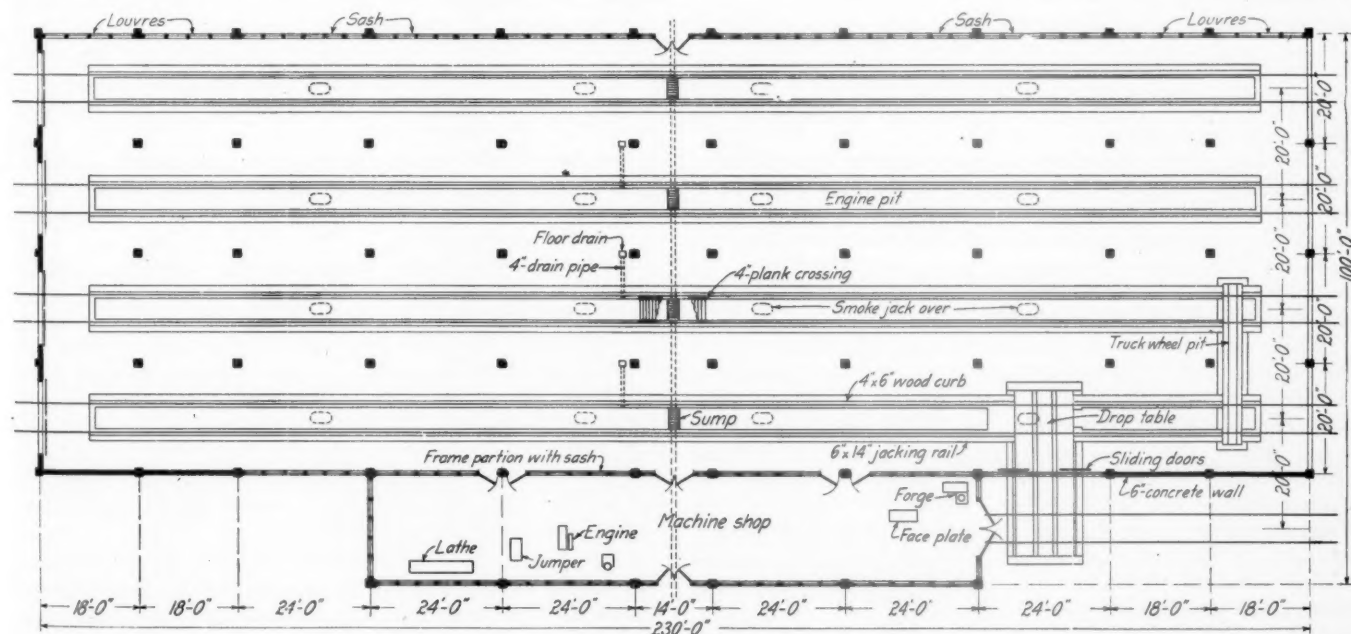
Longitudinal and Cross Sections of the House

but differ in length, being planned to accommodate the types of engines in use on the divisions served. In both cases four tracks are provided, spaced 20 ft. center to center with adequate length for two engines on each track so that the house will accommodate eight engines in all. By providing lead tracks at each end of the house with connections to the main

an annex of 110 ft. by 20 ft. to house a machine shop, foreman's office and engine crew's room. The house at Mojave is of the same dimensions except that the engine house proper is 230 ft. long instead of 206 ft.

The engine pits are 210 ft. in length, and slope from the outer ends toward sumps in the center of building. From these sumps the drainage is conveyed through 12-in. pipes by gravity to a concrete oil trap where, by a system of weirs, the oil is separated and stored in a compartment until a sufficient quantity has accumulated, when it is pumped into the fuel oil tanks. This oil separator also acts as a sludge trap. Transversely of the building at the center is a 14-ft. wide gangway opposite the entrance to the machine shop. Where this gangway crosses the engine pits, heavy plank crossings are laid.

In addition to the engine pits, a truck-wheel pit and a drop-table pit are provided. The drop-table pit is arranged on No. 1 track and extends outside of the building to a



The Arrangement of the Engine House Is Simple Yet Convenient

wheel storage track. This arrangement prevents the blocking of two tracks when wheels are being removed from an engine and brings the wheels to a point immediately adjacent to the machine shop.

Smoke jacks are provided as shown in the drawings. The two outer jacks shown are for the accommodation of the Mallet locomotives operated with the tender at the front end, a practice peculiar to certain portions of the Southern Pacific. The building has been completely piped for air, steam, hot and cold water. Blow-off steam from engines is conveyed to a large tank outside of the building where it is used to heat water for washing and filling of boilers.

The building is of reinforced concrete construction throughout, including the roof slab which is carried on a series of beams, girders and columns. The columns are spaced 20 ft. center to center across the building and 24 ft. on centers lengthwise of the building, except at the ends and in the center where the spacing has been reduced to 18 ft. and 14 ft., respectively, to suit the planning.

The lighting of the building is unusually good, sash being used in practically the whole wall area between columns with the exception of ventilation openings near the roof and necessary low spandrel walls below the sill line. In addition to the sash in the side walls, sash area has been obtained by breaking the plane of the roof to form clerestories. An unusual arrangement has been adopted in the center of the building above the transverse gangway, where the clerestory has been formed by depressing the roof line in place of raising it. This arrangement gives a large sash area and still preserves sufficient head clearance for engines to pass under and is one which has no disadvantage since the house is located in a region where snowfall is a rarity.

The floors are of paving brick set on edge on a concrete base and between engine pits are laid with a crown to drain to the pits. The engine doors at ends of building are made to slide on parallel tracks, the tracks being arranged so that the last door turns back against the side walls of the building.

These buildings were designed and erected under the supervision of W. H. Kirkbride, engineer maintenance of way and structures, Southern Pacific, and W. M. Jaekle, assistant engineer maintenance of way and structures, Southern Pacific System, at San Francisco, Cal.

## Ambiguity of Recapture Provisions Caused Speculation

WASHINGTON, D. C.

**A**N APPARENT ambiguity in the language of different paragraphs of Section 15-a of the Transportation Act has aroused a discussion in some quarters as to whether the so-called "recapture" of one-half of the excess net railway operating income of a carrier begins at 6 per cent, as commonly understood, or at  $5\frac{3}{4}$  per cent, the rate which the Interstate Commerce Commission in its recent general rate reduction order, fixed as the rate of fair return for the period beginning March 1, 1922.

While paragraph 6 of Section 15-a specifically provides for the payment to the government of one-half of the excess above 6 per cent, the preceding paragraph 5 declares that "any carrier which receives such an income so in excess of a fair return, shall hold such part of the excess, as hereinafter prescribed, as trustee for and shall pay it to, the United States." The word "so", under the ordinary construction given to the English language, refers back to the sentence in the same paragraph, which states the impossibility (without regulation and control) of establishing uniform rates upon competitive traffic which will adequately sustain all the carriers without enabling some of such carriers to receive a net railway operating income "substantially and

unreasonably in excess of a fair return" upon their value. Although the commission, under the provisions of paragraph 3 of the section has prescribed  $5\frac{3}{4}$  per cent as constituting a fair return, there would seem to be no conflict between these two paragraphs 5 and 6, unless the difference between  $5\frac{3}{4}$  per cent and 6 per cent be considered enough to represent a substantial and unreasonable excess.

However, paragraph 9 of Section 15-a, which directs the commission to prescribe rules and regulations for the determination and recovery of the excess income, says that "the commission shall make proper adjustments to provide for a computation of excess income for a portion of a year, and for a year in which a change in the percentage constituting a fair return or in the value of a carrier's railway property becomes effective."

The commission was required to make adjustments for that portion of the year 1920 after this part of the Transportation Act became effective, but, it is argued that there would be no occasion to make adjustments to provide for the computation of excess income for a year in which a change in the percentage constituting a fair return unless the point at which recapture begins is to fluctuate with changes in the percentage declared to represent a fair return.

On the other hand, the general impression that Congress intended to allow an individual carrier or system 6 per cent before recapturing any excess is strengthened by paragraph 7 of Section 15-a, which provides that a carrier may draw from the reserve fund, to be established with its half of its excess, "to the extent that its net railway operating income for any year is less than a sum equal to 6 per centum" of the value, for the purpose of paying dividends, interest or rents. It would be a rather strange procedure to require a carrier which earned, for example,  $6\frac{1}{4}$  per cent in one year, to pay  $\frac{1}{4}$  per cent to the government and put another  $\frac{1}{4}$  per cent in a reserve fund, and at the same time to permit it to draw from the reserve fund in the next year enough to make up a sum equal to 6 per cent, which it might then pay out in interest and dividends. This would restrict a road from paying out more than  $5\frac{3}{4}$  per cent in a so-called "good" year but would let it pay out as much as 6 per cent in the "lean" year following.

Some confusion between 6 per cent and a fair return has been caused because paragraph 2 of Section 15-a directs the commission to make rates in an effort to produce a net railway operating income equal as nearly as may be to a fair return, and for the two years beginning March 1, 1920, directed the commission to take as such fair return  $5\frac{1}{2}$  per cent plus, in its discretion, not to exceed  $\frac{1}{2}$  per cent, and the commission in Ex Parte 74 did add the  $\frac{1}{2}$  per cent. At the present time, however,  $5\frac{3}{4}$  per cent is officially presumed to be a fair return.

The commission has as yet made no ruling and placed no interpretation upon the recapture provisions because the question will not become a practical one for it until at least the end of this year.

The commission is still struggling with the returns of the carriers to show which of them earned an excess over 6 per cent for that part of 1920 during which they were not under guaranty and also for the year 1921. The returns are naturally based on the railroads' own claims as to their value and while the commission has received a few small checks representing half of the admitted excess, it is understood it is somewhat at a loss as to what to do with them until it has ascertained the value of the roads that have sent the checks and thus put itself in a position to be able to say whether the checks are sufficient.

PURCHASE BY THE FEDERAL GOVERNMENT of the Cape Cod and Dismal Swamp canals would be authorized by an amendment to the rivers and harbors bill which has been adopted by the Senate committee on commerce.



# Relations of Transportation to Agriculture

## Congressional Commission Makes Report Containing Valuable Data on Relations of Rates and Prices

WASHINGTON, D. C.

THE JOINT Commission of Agricultural Inquiry has made public recently a voluminous report to Congress of the results of an exhaustive investigation of the relations between transportation and agriculture which contains much valuable data in the form of charts and tables regarding comparisons of freight rates and the other factors entering into the wholesale prices of agricultural products and of articles purchased by the farmer. The commission has not, however, found it possible to carry its data so far as to show the relations between rates and retail prices, on account of the difficulty of tracing commodities through because of mixing of grades and for other reasons. Some of the findings and recommendations of the commission have already been published in the form of advance statements by the chairman of the commission, Representative Sydney Anderson of Minnesota. This investigation is somewhat unique among congressional committee inquiries for the reason that it was conducted entirely without public hearings, but by the process of direct investigation and study in which a number of prominent railroad officials, as well as representatives of agriculture and industry, participated and assisted. The present report dealing with transportation is Part III of the complete report of the commission.

A large part of the report is devoted to a study of the history and development of the nation's transportation system, including its finances, organization, plant, methods of operation, etc.

An interesting feature is an estimate that freight charges in 1920 represented 6.9 per cent of the wholesale or factory value of products of manufacture, including raw materials of every kind and also the transportation for final distribution to ultimate point of consumption.

### How the Inquiry was Conducted

The commission, in order to secure the material for this report, established a transportation division on August 1, 1921. This division organized throughout the United States committees representative of agriculture, industry, and transportation, which, through specific questionnaires, obtained the statistical data upon which the conclusions of the commission primarily rest.

One hundred and fifteen general committees, representing agriculture and industry, were established, and these in turn appointed subcommittees in the different sections, numbering approximately 200. The appointees to these committees were those whose knowledge and experience qualified them particularly to analyze the conditions of the phase which was assigned to them. In like manner executive committees of transportation were formed, and in turn, appointed subcommittees throughout the country.

In co-operation with the transportation division, the executive committees in charge of railroad, electric, motor, and other branches of transportation worked out the questionnaires forwarded them by the commission and analyzed in minute detail the pertinent facts in their relation to agriculture and industry and transportation. The committees representing agriculture, industry and transportation, correlated their efforts where possible and at all times co-operated in the endeavor to arrive at the basic data called for by the commission.

The transportation division opened offices in Washington for the assembling and analysis of the data procured by this comprehensive field organization. It also called to Wash-

ington accredited representatives of agriculture, industry, and transportation to confer upon the details of the inquiry, to effect a better understanding of the relation of transportation to agriculture and industry, and to obtain an initial agreement as to the basic facts developed by the field organization.

The body of the report having been tentatively set up, a further analysis of the data and the findings was undertaken by an advisory board to the transportation division, which was called to Washington and requested to study a summary of the work accomplished thus far as presented in an agenda and working outline. This method was pursued in order that the commission might have the benefit of the views of accredited representatives of these three great branches of our economic life. The collection and assembling of the data in this report represent the combined efforts of over 1,600 people and the circulation of more than 250,000 questionnaires.

The commission did not undertake an investigation of the labor problem as effecting transportation, in so far as that problem involves the question of proper wages, for it felt that was outside of the scope of its inquiry. It does present the facts, however, as to labor costs in transportation, gathered from official reports, and it makes certain recommendations concerning the adjustment of labor disputes.

### Summary of Recommendations

The commission makes the following recommendations:

1. That the transportation rates on many commodities, more especially the products of agriculture, bear a disproportionate relation to the prices of such commodities; that there should be immediate reductions in transportation rates applied to farm products and other basic commodities; and that reductions in rates upon the articles of higher value, or upon tonnage moving upon so-called "class rates," are not warranted, while the rates upon agricultural products and other basic commodities remain at their existing levels; that greater consideration should be given in the future by public rate-making authorities and by the railroads in the making of transportation rates to the relative value of commodities and existing and prospective economic conditions.
2. That the pyramided per cent advances in rates which have been authorized by the Interstate Commerce Commission or made by the United States Railroad Administration caused the dislocation of long-standing rate relationships between rates upon agricultural and industrial products between competitive enterprises and competitive sections of the country; that the railroads and the public rate-making bodies should seek to readjust rates of the country so as to preserve so far as practicable the general relationship of rates existing prior to 1918, with due regard to present and future changes in economic conditions.
3. That in establishing the general level of rates and commodity and class rates the federal and state regulatory bodies give greater consideration to existing and prospective economic conditions and to the relationships existing between the price level of commodities and the level of transportation rates as well as the relationship existing between the price of different commodities, the weight of such commodities, and the space required for their transportation.
4. That regional agencies of the Interstate Commerce Commission be established whose duty it shall be to consider and adjudicate questions of regional application and to co-operate with the state commissions with a view to minimizing conflicts between state and federal regulations as to rates, facilities, and practices; that the state commissions have representation in such regional agencies in all cases in which intrastate rates, facilities, and practices over which the state commission has jurisdiction may be affected.
5. In view of the conclusion of the International Joint Commission, this commission recommends that the government enter into immediate negotiations with the Dominion of Canada for the conclusion of a treaty for the improvement of the St.

Lawrence River, through a commission directed to make the further study suggested by the International Joint Commission, and authorized to proceed with the work if its plans, including a plan of financing, shall be approved by Congress and the Dominion of Canada.

6. Complete standardization as rapidly as possible of all freight equipment, except with respect to cubical and weight-carrying capacity.

7. The unification and joint operation of facilities at terminals wherever such unification and joint operation will result in economy and better service.

8. Prompt consideration and adoption of a comprehensive plan for central control and distribution of freight cars.

9. That railroads and shippers co-operate to secure the full utilization of the carrying capacity of cars wherever possible.

10. That the supply of box cars, coal cars, stock cars, and refrigerator cars is inadequate to meet the demand during normal periods of activity and should be rapidly augmented.

11. That special consideration should be given to increasing the available number and efficiency of refrigerator cars. Older and inefficient types of refrigerator and heater cars should be progressively retired.

12. That the number of cars in bad order exceeds all previous records, and unless bad-order cars are promptly repaired, the supply of serviceable cars will be materially impaired.

13. That a large proportion of the cars being used in interline movement are box cars and should be made fit for bulk grain loading; and all other classes of freight equipment should be promptly made suitable for all requirements, including general interchange throughout the country.

14. That the number of locomotives operating and owned by some railroads is inadequate to meet the need during business activity and it should be augmented.

15. That there is need for increase in terminal facilities generally, and that special consideration should be given to an increase in facilities at ports, including facilities for handling coal at tidewater.

16. That there should be complete correlation of ore and coal facilities at Lake Erie ports.

17. That permanent joint railroad and shippers' committees be organized to co-operate in carrying on a nation-wide campaign to reduce loss and damage of goods in transit.

18. That freight-revenue divisions should be promptly revised to the basis of two-figure percentages.

19. That regional clearing houses be established for the current settlement of debits and credits growing out of rate divisions.

20. That the railroads should adopt universal through way-billing of interline freight.

21. That the railroads be required to maintain complete cost data covering each item of expense with particular reference to the maintenance of equipment.

22. That the railroads be required to adopt better systems for checking the extent and value of repairs to equipment when made by lines other than the line owning the car.

23. That the railroads of the country establish regional traffic executives.

### Better Relations With Public Needed

24. That the relations between the public and the railroads be improved, and a closer contact and better understanding established through the organization by the railroads of public relations departments, so that wherever possible conflicts between persons, industries, or localities and the railroads with respect to rates, facilities, and practices be settled by informal negotiation, with a view of reducing the necessity of resort to formal complaint and adjudication before the Interstate Commerce Commission.

25. That the Interstate Commerce Commission be directed by Congress as a part of its continuing duties to investigate the development and correlation of the various systems of transportation and their relation to agriculture, industry, trade, and commerce, and report to Congress from time to time as to the correlation of such transportation facilities and their better relation to agriculture, industry, trade, and commerce.

26. That the bill "To provide for classification of civilian positions within the District of Columbia and field service" (H. R. 8928) shall not apply to the employees of the Interstate Commerce Commission, but if the Interstate Commerce Commission employees are included under the classification bill, due regard shall be given to the peculiar character of the organization of the commission and the classification and duties of its employees.

27. That Congress continue to promote an adequate program of highway construction and maintenance, directed to the more effective correlation of highway transportation with rail and water transportation.

28. That the program of highway construction and the maintenance by states and counties be continued under the direction of qualified experts with particular reference to the construction and maintenance of farm-to-market roads. That the

program of appropriations for research into methods of road construction and maintenance, density, character, and the effect of traffic be continued and regulation of traffic based upon the facts ascertained by such research.

29. That the several states co-operate in effecting a uniform basis for taxing motor trucks and other motor vehicles which shall fairly represent the reasonable proportion of the cost of highway construction and maintenance chargeable to such vehicles.

30. That a study be made of postal rates with a view of a readjustment of charges and the removal of present rate inconsistencies.

31. The commission makes no recommendation with respect to government aid to American shipping, but if government aid is given to American shipping it ought to be given in such a way that the amount of such aid may be definitely known, and should be limited to such aid as will fairly represent the difference in capital and operating cost required by higher American standards and more burdensome navigation regulations, compared with foreign capital and operating costs and foreign navigation regulations.

### Rates and Prices

The commission makes the following findings:

1. That freight rates upon perishables normally take about one-third of the selling price, frequently running as high as two-thirds; that these rates in periods of low-price levels and slight demand constitute a very heavy burden upon this traffic. This is especially true, owing to the average length of haul of these commodities, which was shown to be more than 1,400 miles in a study of 9,476 shipments.

2. Prices of canned goods are practically back to pre-war levels.

The existing freight cost per case is substantially lower in relationship to value of the product than the freight cost of the so-called basic commodities, including grains.

3. That rates and sales margins on hay have been abnormally high in recent months and have greatly restricted its distribution.

4. That freight rates on highly fabricated articles of wearing apparel, such as boots, shoes, dry goods, men's and women's suits, etc., are not a material factor in increasing or reducing prices of these commodities.

5. That imperative need exists for the organization of the statistics and knowledge of transportation and its relation to agriculture, industry, trade, and commerce through the establishment of private research and educational institutions under disinterested auspices for the purpose of promoting education in the principles, operations, and practices incident to transportation.

6. That greater uniformity is desirable in the requirements of state legislation and state regulatory bodies in regard to the length of trains and crews required to man trains of different lengths and similar requirements affecting operation of railway systems.

7. The aggregate compensation paid to railway employees increased 151 per cent in 1920 over 1916 and 90.7 per cent in 1921 over 1916; the number of employees increased 384,830 in 1920 over 1916, or 23.3 per cent; and 14,204 in 1921 over 1916, or eight-tenths of 1 per cent. In most cases the aggregate number of hours worked increased in lower ratio than the aggregate compensation and the number of employees.

8. That the increase in efficiency of operation of transportation is shown by the fact that in 1890, the first year for which statistics were available, for every \$100 investment in property 983 tons of freight were carried 1 mile and 163 passengers carried 1 mile; whereas in 1920 for every \$100 investment in property 2,063 tons of freight were carried 1 mile and 231 passengers were carried 1 mile, an increase of 110 per cent in freight and 50 per cent in passenger traffic for each \$100 of property investment. Property investment as reported to the Interstate Commerce Commission has increased 155.82 per cent, the tons carried 1 mile 438 per cent, and the passengers carried 1 mile 295 per cent in the same period.

9. That in 1921, for each 100 ton-miles yielding revenue the railroads produced 147.6 nonrevenue and tare ton-miles. The revenue producing ton-miles, constituting 40.3 per cent of the total, is therefore supporting nonproductive ton-miles equaling 59.7 per cent of the total. That the expense incident to the transportation of the nonproductive tonnage must be met either by higher freight rates or a reduced return to the railroad companies.

That the significance of this is not generally understood by railroad officials and the public. That economical transportation of the products of agriculture and industry require a reduction in the tare or waste ton-miles.

10. That the revenue return to the railroads should be sufficient to enable them to sustain the value of their properties put to public use and to attract the capital required for the expansion and improvement of property, facilities, and service.



11. That sound railroad finance requires that a larger part of the capital necessary for railway development and equipment be secured by stock issues instead of by bond issues.

12. That the issuance of tax-free securities by federal, state, and municipal government should be reduced to the lowest possible limits, so that taxation can be reduced and capital be allowed to accumulate for use at fair interest rates by agriculture, industry, and the railroads.

13. That a comparison of the operation of the railroads during the period of federal control and under competitive management in the post-war period affords no conclusive basis as to the relative efficiency of government and private operation. The conditions existing in both periods have been too abnormal to permit of sound comparison or accurate measurement of the relative efficiency in either. An examination of the operation of government-owned railroads in foreign countries both before and after the war, however, does afford some basis for an estimate as to the relative efficiency with which private management in this country and government management in foreign countries have withstood and surmounted the difficulties attendant upon the dislocations and the abnormal conditions which followed the war period. It may be said that, measured by the relative performance and cost of service, private management in this country is more efficient at less cost than foreign governmental management.

14. That the daily, weekly, monthly, and yearly fluctuations in shipments of live stock are very marked. Railroads, shippers, and stockyards should co-operate to bring about a more even distribution of shipments at the live-stock markets.

15. That mine prices, freight rates, and sales margins on both bituminous and anthracite coal have very greatly increased since 1913. There has been practically no deflation in this industry, although prices were somewhat lower in 1921 than in 1920. Coal is an element in the cost of production of a very wide range of manufactured products, and increases in coal prices are promptly reflected and often multiplied in the final price of highly fabricated articles. A reduction in mine prices, freight rates, and sales margins on coal, especially bituminous coal, would probably be promptly reflected in improved business conditions.

16. That fertilizer and phosphate prices are now close to the pre-war basis, except for the higher freight costs now prevailing.

17. That the weighted average of farm implement factory prices shows these prices, exclusive of power, equipment, and twine, to be 41 per cent above 1913; inclusive of power, equipment, and twine, these prices are now approximately 20 per cent above 1913.

### Relation of Freight to Farm Prices

The course of the relationship of freight charges to farm prices from 1909 to 1921, inclusive, is shown in tables given in the report. The five-year average from August 1, 1909, to July 31, 1914, is used as 100 per cent of the average price of farm products, and the railroad revenue per net ton-mile from July 1, 1909, to June 30, 1914; the nearest comparable figure in the statistics of the Interstate Commerce Commission, is used as 100 per cent of the railroad charges. From 1910 to 1916 the two lines moved side by side in very close relationship to each other. Then began a tremendous increase in the price of farm products, until in June, 1920, it reached the maximum of 246. Railroad freight rates from 1916 to 1917 show practically no increase. From 1917 to 1920 they increased more slowly than did the price of farm products.

In July, 1920, the slump began, which brought the index figure for farm products down from 246 in June, 1920, to 106 in June 1921. In the same period railroad charges went up from 127 in July, 1920, to 171 in June, 1921. On the basis of the last monthly figures available, in October, 1921, farm products show an index figure of 102 and railroad rates of 169. "In this period of falling prices for farm products the increased freight charges made the farmer feel more keenly the relationship of freight charges to the prices obtained for his products." The report says: "On the basis of this a table has been constructed to show the purchasing power of farm products in terms of transportation. This figure is obtained by dividing the index figures for farm products by the corresponding index figure for freight changes. While the purchasing power was about 100 in the previous years, it was in November, 1921, only 72. So far

as transportation is concerned the farmer is suffering from a 72-cent dollar."

### PURCHASING POWER OF FARM PRODUCTS IN TERMS OF TRANSPORTATION

Year and month	Purchasing power	Year and month	Purchasing power	Year and month	Purchasing power
1910 .....	\$1.03	1920—Continued.		1921—Continued.	
1911 .....	.95	March .....	\$1.74	February .....	\$0.76
1912 .....	1.00	April .....	1.78	March .....	.68
1913 .....	1.01	May .....	1.85	April .....	.63
1914 .....	1.02	June .....	1.89	May .....	.64
1915 .....	1.02	July .....	1.89	June .....	.62
1916 .....	1.24	August .....	1.74	July .....	.64
1917 .....	1.86	September .....	1.34	August .....	.66
1918 .....	1.78	October .....	1.16	September .....	.68
1919 .....	1.63	November .....	.99	October .....	.76
1920:		December .....	.88	November .....	.72
January .....	1.76	1921:		December .....	....
February .....	1.75	January .....	.82		

One table in the report indicates the estimated value of commodities transported in the United States in accordance with the United States census of 1914. The total production of agriculture, manufactured, and mineral products is added to the imports, from which is made an estimated deduction of these same articles which do not move by railroad transportation. The estimated total value of \$33,298,000,000 divided by the total tonnage of railroads, 1,094,000,000, gives an average value of \$30.40 per ton. The average revenue per ton for the same period was \$1.84; the proportion of freight to the value of goods transported as estimated is about 6.05 per cent.

### VALUE OF COMMODITIES TRANSPORTED IN UNITED STATES, 1914

[000,000 Omitted]

Production:		
Products of agriculture .....		\$9,849
Manufactures .....		24,246
Minerals .....		2,394
Total .....		\$36,489
Imports .....		1,894
Total .....		\$38,383
Deductions for local use:		
Products of agriculture .....	\$2,202	
Manufactures .....	2,023	
Minerals .....	620	
Imports .....	240	
Total .....		5,085
Total amount transported .....		\$33,298
Total tonnage carried by railroad .....		1,094
Value per ton .....		\$30.40
Freight revenue (Class I and II roads) .....		\$2.115
Revenue per ton .....		\$1.84
Per cent freight to value of goods transported .....		6.05
Per cent freight to total production plus imports .....		5.26

This commission has compiled a large amount of data to show the economic relationship of freight rates to the prices of agricultural products. In compilation of such information data was secured from the various market points showing the prices actually paid by the wholesaler for these farm products as near as possible to the third Tuesday of each month during the seasons of 1913, 1916, and 1921. Similar information was then secured from the country shipping points showing the prices a few days earlier, in order to allow for the time in transit. An addition of the freight rate to this country price would show the margin or spread upon which the city dealer operated.

This method of making comparisons is, of course, subject to various objections, the report says. The commission met a great deal of difficulty in matching grades, particularly in the case of wool and fruits and vegetables. In other cases it was impossible to secure data throughout the years. Furthermore, it was impossible in every case to secure a weighted average of prices either at the market or on the farm, and it has been necessary to use a mean between the high and low point in the construction of the economic relationship charts.

Some extracts from the report follow:

It is obvious that freight costs distributed over the unit of sale will always be greater upon the bulky, heavy-loading commodities, whose original value is comparatively low, than on the higher class of articles, such as finished food products, clothing, high-

grade furniture, etc. It must be expected that the percentage of freight costs to the prices of these low-grade commodities can not be as low as those for the higher-valued articles, as these commodities, with the other so-called low-grade commodities of heavy tonnage, represent the great factors in the earning capacity of our railroads.

### Rates on Basic and High Grade Commodities

Higher freight rates are not infrequently urged as an excuse for increases in prices without justification. While freight rates are often a considerable factor in the cost of distribution of low price heavy-tonnage commodities, and may restrict the radius of distribution thereof and sometimes even prevent shipment altogether, as a rule freight rates have not kept pace with increases in prices of such articles as dry goods, boots, shoes, and other highly fabricated articles usually purchased in less than carload quantities and do not restrict or diminish the movement of such commodities. The influence of freight rates upon basic commodities is increased by the fact that such increases usually become a part of the dealer's cost and the basis of profit additions, and are thus multiplied in the final price paid by the consumer. Upon the higher cost and more highly fabricated articles the freight charges are sometimes absorbed by dealers, and even where they are a part of the basis cost upon which profits are figured, are not multiplied to the same extent as freight rates upon high tonnage, lower-priced commodities.

### Adequacy of Equipment

The adequacy of the present railroad freight-car equipment is dependent to a large extent upon the efficiency with which cars are handled with respect to their proper maintenance, distribution, and movement. The question of car distribution will be discussed later. It is the desire at this point to consider the increase in the number and capacity of cars available during the past several years in its relation to the amount of tonnage transported.

The number of cars owned and operated by the railroads has increased 6.7 per cent over 1911. The aggregate capacity has increased 18.2 per cent. The net ton-mileage for 1920 shows an increase of 62.4 per cent over 1911. The traffic handled during 1920 was greater than in any previous year. It appears fair to assume that the increase in car supply must be based upon the increase in the volume of traffic offered, with due consideration for efficiency of handling. The necessity for a greater number of freight cars during periods of maximum movement is in part the result of light loading, bad-order cars and slow movement on congested railroads or in terminals. The purchase of the necessary new freight-car equipment by the railroads depends upon their financial condition. There appears to be in this question a much more important principle; and while it is desirable to prevent any unnecessary outlay of money, we have here a situation of vital interest, not only to the investor in railroad securities but in a much larger degree to the shipping public, and, in fact, to our entire economic structure. Carriers feel that the supply of cars should be adjusted fairly and equitably as between supply and demand. In other words, it is felt by the railroads that they can not be expected to meet a short peak demand. They take the position that they must guard against the acquirement of cars to serve only during short peak periods and which must necessarily lie idle at all other times, thus creating an economic waste.

The commission feels that transportation should be made an incident to trade and should not restrict commerce. If the carriers do not supply sufficient equipment to reasonably meet the demands, an artificial situation economically unsound is created. Failure to supply cars in adequate numbers during any considerable period usually results in an inflation of prices. During times of general business activity as well as at other times there are a large number of individuals throughout the country striving to make a living through the purchase and sale of goods, each transaction dependent upon transportation by railroad. It does not seem right or proper to deny them the opportunity which should be extended to every shipper. The commission is of the opinion that a sufficient number of cars should be added to the supply to meet the demand for cars wherever ordered and in whatever quantity they may be required.

The major trend of freight traffic is from west to east, and it is largely moved in box-car equipment. The return movement of empty box cars from the East to the West must be made in heavy volume to meet the needs of originating territory. The supply of box cars is insufficient to meet the peak demands, and it should be augmented by additional cars.

The supply of stock cars does not fully meet the requirements of the peak demand, which in the case of stock is especially urgent. The number available should be augmented by new construction.

The present number of coal cars is insufficient to meet the peak demands of the basic industry requiring such equipment, and should be augmented by new construction.

The present supply of refrigerator cars is insufficient to meet the peak demands for perishable loading and should be rapidly augmented by new construction.

Although an advance has been made in the standardization of freight car equipment, there is room for still further improvement. Types of freight cars have been developed ostensibly to serve the shipper along a particular railroad to better advantage, but which in reality represent the personal views of some executive, and in most cases cost more money. The eastern lines generally have adopted the 36-foot box car as standard while the standard of the western lines is a 40-foot car. When it is understood that a very great proportion of the loading must be moved in cars foreign to the originating line, the folly of such a course will be appreciated.

### Car Service

This commission is of the opinion that the public welfare requires the adoption of a comprehensive system for the control of freight-car equipment which will make possible the reduction and the elimination of the waste at present incurred by the unnecessary haul of empty cars and which will prevent the development of emergency conditions. The country needs uninterrupted transportation service. It is all very well to prepare for emergency conditions. It is, however, clearly apparent that with respect to freight-car control and distribution, and the co-ordination and unification of terminal facilities, the carriers have not progressed. In fact, there is a strong tendency toward reaction in this important matter, and unless prompt and adequate action is taken, emergency conditions with all of the attendant harassments to business will certainly result.

It would seem impossible to intelligently handle the car distribution of the country without current information as to the flow of traffic throughout the country. One plan has been suggested which contemplates the subdivision of the railroad mileage into districts of comparatively small extent, each division thus formed to include, so far as possible, distinct producing territories but not necessarily to include all lines of any particular railroad. The points of contact with other districts would be fixed at railroad division terminals or at junction points, each district placed in charge of a supervisory officer who would secure daily passing reports from each point of contact with the adjoining districts. These reports would indicate the volume of loaded and empty cars moving in each direction, classified as to type of car. This plan would make possible a daily balanced movement and the fuller utilization of power. Heavy loaded movements in one direction could, where desirable, be instantly met with a movement of empty cars in the opposite direction. Whatever plan is adopted must be based upon the premise that each individual shipper, each group of shippers, and each of the several producing or originating districts throughout the country must be fully supplied with freight equipment at all times. Shippers in one section of the country should be wholly dependent upon the voluntary action of railroad officers in another section of the country who are only concerned with the requirements of shippers in the district served by them and who may hold and use cars belonging to other railroads serving other districts.

### Increased Terminal Facilities and Equipment Needed

Although operating efficiency shows a steady improvement, the lack of terminal tracks and facilities and of a sufficient number of freight cars has, during periods of business prosperity, proved to be a severe handicap to the business of the country, influencing as it does the processes of inflation at the outset and later the reaction by the stagnation it has induced.

The necessity for the increase and improvement of railroad facilities must be measured not by the volume of traffic moving presently nor in previous years on the average, but by the amount moved during the years of greatest business activity plus the annual increase produced by the steady growth of the country and the expectancy of the continuance of such normal growth. Increases in efficiency made possible by improved devices will in some degree modify these requirements. It is essential, however, and the country demands that there shall be a margin in the transportation facilities in excess of what are termed "normal requirements," so that any expansion of business activity may proceed unhampered.

The car supply must at all times meet every reasonable demand. The terminal facilities must be improved to handle adequately all traffic seeking an outlet through the ports or inland termini, either by the unification and joint operation of existing terminal facilities or by the addition of new trackage and other facilities, or by both.

The transportation facilities of the country must be placed upon a solid foundation. It will not do to make up deficits by appropriations of public funds. The railroad companies must be operated with the expectation that the gross revenues will be sufficient to cover operating expenses and leave a reasonable return



upon the investment. It is of paramount importance to the public welfare that the transportation companies be made going concerns; that they be placed upon a substantial foundation in every respect; and that the operating expenses be reduced by careful and efficient management.

During the period of federal control terminal facilities in many of the larger cities of the United States were consolidated. These consolidations have been largely abandoned under private control. This commission believes that the unification and joint operation of terminals affords an opportunity for very large savings in operating costs, and will also contribute to the efficiency of the operation of the railroads as a whole, and that such unification and joint operation of railroad terminals should be accomplished wherever better service and more efficient operation can be secured at less cost.

There is an excessive duplication of tracks to parallel construction which should be eliminated by appropriate traffic arrangements between the railroads concerned. This commission believes such arrangements should be consummated wherever they can be in keeping with the maintenance of reasonable competition between the railroads, in order to avoid the unnecessary expense of operation which this parallel construction involves.

### Relation of Railroad Credit to Industry

The railroads are one of the largest consumers, taxpayers, and employers of labor, but these low returns prevent them from promoting prosperity and providing adequate facilities, improvements, and equipment until that situation is improved.

Considering the present obligations resting upon the government and upon the country at large, and as a matter of economic policy, new money for railroad improvement should not be raised through constant government aid. In the public interest the railroad industry must rest upon its own foundations, and its revenues must be so constructively regulated that their operations will produce enough to pay fair wages, cost of materials, taxes, meet the fixed charges, pay a fair dividend, and leave a small margin to attract investors of new capital. In other words, to obtain new railroad capital, the opportunities to earn and pay regular returns must exist, and railroad managements must be encouraged to exercise the greatest initiative in improving and extending transportation facilities. Furthermore, conditions should be created whereby the sale of capital stock by the principal roads will become possible and the continued increase in funded debt will be minimized.

Railroads can not go on constantly increasing their indebtedness and not building up an equity in their properties underlying their debt. When the investor thinks that too large a percentage of the value of the property of a given company is represented by debt and not enough by stock, he will decline to buy further bonds of that company, or if he takes them it will be only at an unduly high interest rate. It is important, therefore, that railroad credit should be so strengthened as to enable a properly capitalized, well-managed company with adequate traffic to do its financing through issues of stock. Stock, being junior to debt, and having no lien on the property or equipment, naturally must bring a larger return in order to be attractive.

In considering the financial aspects of the transportation industry, it is recognized that the cost of capital is a part of the cost of transportation and enters into the rate charged for transportation. An investment which commands public confidence and brings an assured return is more freely made and on a lower basis of cost than one which is subject to uncertainty and possible attack. It is therefore of great importance that the earnings of well-managed and properly capitalized railroads should be such as will protect their securities outstanding and attract, on reasonable terms, the new money needed for additional facilities. While there has been more general public discussion of, and inquiry into, the cost of sustaining railroad investment, yet the return paid thereon requires a much smaller outlay than for most of the other important railroad costs.

### Railway Expansion Necessary

The transportation systems must be continually improved to keep pace with industrial progress. It is possible to cheapen transportation through intensive development such as electrification, improvement of rolling stock and other equipment, and the use of the most modern methods in the loading of trains. This country has enjoyed railroad transportation on a cheaper basis than practically any other civilized country in the world, but can not continue to do so by restricting initiative or by undue limitation of railroad profits earned under uniform and reasonable rates.

The production of the principal products of the country increases on an average from 3.6 to 4 per cent per annum, and the traffic units consisting of the combined ton mileage and passenger mileage of the railroads increased on the average between 6 and 7 per cent per annum since 1908. In periods of prosperity these

increases are substantially exceeded, but the transportation service of the country needs an increased yearly investment to finance additional tracks, stations, equipment, and facilities to take care of this growth. While it is generally stated that a billion dollars a year ought to be provided to finance railroad extensions, new equipment, and improvements, the actual experience since 1908 is that the property investment of the railroads has increased on an average of only \$540,000,000 per annum. However, in view of the fact that prices of material and labor have increased and that increased railroad property investment has been restricted for several years, at least \$750,000,000 per annum should be spent for several years for the foregoing purposes.

An important consideration in this connection is that the capital funds of the country loaned by the investors and the banks is the surplus derived from the enterprise, thrift, and sacrifices of all hard-working, prudent citizens and conservatively managed corporations, and is a species of general reservoir from which all forms of industry must draw. It is important to the agricultural industry, which depends on that reservoir in the same way as the railroad industry, that the rate of interest should not be unduly raised to the railways because of reduced net earnings, nor because of large issues of tax-free securities. If the interest rate to the railways rises, the interest rate to the farmer will also increase, for the capital market is on a competitive basis, and what effects the interest rate for one industry affects the rate for all industries. In this emphatic way does the independence of all industry, in our highly complex economic system disclose itself.

### National Character of Commerce

The national character of commerce is becoming more and more apparent, and nothing has been made more evident through the investigations of this commission than this fact. It is witnessed by an increase in the average haul of commodities, by the wide distribution of many commodities, the production of which is centralized in a few localities, and by the competition of far-distant communities centralizing at points of concentrated use and consumption. All of this emphasizes the wisdom of the recognition and assertion of the paramount authority of the federal government in the control of interstate transportation. On the other hand, the widely differing conditions found in different states and communities emphasizes the importance of state control of such matters as are of local concern, including the rates and regulations local and only statewide in application. No centralized authority, however efficient or democratic, can with reasonable dispatch and with due regard for local requirements consider and finally determine the vast number of questions of rates, regulations, practices, and facilities which properly and inevitably arise in connection with concerns wholly within a state; and the field of regulation of state legislatures and of state commissions ought and will continue to be a very wide one. It is probable that no court will ever be able to lay down a rule eliminating the respective federal and state powers with respect to transportation with sufficient definiteness to avoid conflicts in the future in the exercise of their representative powers.

All of these considerations, it seems to us, lead logically to the conclusion that there is need for the establishment of regional agencies of the Interstate Commerce Commission to consider and adjudicate questions of regional application and to co-operate with the state commissions with a view of minimizing conflicts between state and federal regulations as to rates, facilities, and practices, and in order that these conflicts may be disposed of in larger measure by consultation and co-operation between state and national authorities, thus limiting the range and number of cases to be judicially determined by the federal authorities. In such regional agencies the state commission should have authoritative representation in all cases involving intrastate rates, facilities, and practices in which the state commission is interested.

Chairman Anderson has received the following letter from President Harding with respect to the proposed National Transportation Institute:

"I want to thank you for your communications, both personal and otherwise, concerning the program for organizing a National Transportation Institute. I was much impressed with your statement of the purpose of such an organization and am convinced that it would be of great practical usefulness. The broad and outstanding study of the entire transportation problem is unquestionably a serious national matter—indeed I think I may well say a serious world necessity, at this time. Such an organization as you are proposing ought to become a power in connection with the nation-wide consideration of these problems and a useful directing force in connection with the determination of public policy."

In the *Railway Age* of July 1 a letter to Mr. Anderson

regarding the proposed Transportation Institute which was written by Representative Webster of Washington was erroneously attributed to Chairman Winslow, chairman of the House committee on interstate and foreign commerce.

## Contract for Exchange of Materials Held Not to Constitute Control

WASHINGTON, D. C.

THE INTERSTATE Commerce Commission has dismissed the joint application of the New York, Chicago & St. Louis and the Lake Erie & Western for approval of a contract for the exchange of materials and supplies between the two companies, which was filed on the theory that such a contract might come within the provisions of paragraph 2 of Section 5 of the interstate commerce act, which provides for the acquisition of control of one carrier by another to the extent authorized by the commission. The application was filed for the two roads by W. A. Colston, vice-president, who was recently director of the Bureau of Finance of the Interstate Commerce Commission, but the commission holds that the proposed contract does not constitute a means of acquiring control within the meaning of the paragraph of the law referred to.

The contract provides, in effect, that whenever either company shall have, or may conveniently obtain, any materials or supplies not needed for its own immediate purposes, it shall, when desired by the other company, furnish such materials or supplies to the other at not more than cost, plus 10 per cent of cost, freight charges, and the cost of labor employed in handling, applying or fabricating any such materials and supplies; that the officers of said companies may purchase or obtain any necessary materials and supplies on joint account and when so obtained they may be furnished when desired to either of the companies, and when so furnished shall be accounted for in all respects in conformity with the assumption that the lines of said companies form one operating system under common control and management, irrespective of separate ownership and accounting; and that, so far as transactions between said companies are involved, the agreement shall apply to all dealings in supplies or other articles of commerce and all contracts for construction or maintenance, or other matters contemplated by section 10 of the so-called Clayton Anti-trust act.

The applicants stated that the object of the agreement is to relieve the companies of the necessity of complying with this provision of the Clayton act to the extent that it may be involved in transactions between them, thereby avoiding inconvenience and delay and permitting more efficient and economical operation. The applicants have certain common directors and officers, the holding of such positions having been authorized by the commission, and the same interests own a majority of the outstanding capital stock of both companies.

The commission says in its report:

"The proposed contract may be said to give each company a certain measure of control over specific transactions and contracts of the other and to facilitate the establishment of a relation that will make possible a closer union for operation and management. The applicants contend that common control of two or more corporations by means of common directors and officers is one of the means of control which is recognized by the act, and that the additional measure of control afforded by this contract is supplementary thereto, and simply carries the common control one step farther towards an ultimate complete unification of operation and management, without resulting in any corresponding unity of ownership.

"The control provided for by this paragraph, however, is

control over one or more carriers by another carrier and not mutual control by the two carriers over the same subject-matter. Moreover, we think the 'control' that the framers of the act had in mind is the full and complete control which may be exercised by the owner of the majority of the capital stock of a carrier, or by the lessee of the property, and not the control which might be exercised by one carrier in the purchase of materials and supplies for another carrier. It is obvious that, unless the paragraph gives us authority to make an order approving this contract, no expression of approval on our part would have the effect of relieving the applicants from the possible application of restrictive laws. Inasmuch as we are of the opinion that paragraph (2) has no application to the transaction involved herein, it follows that the application must be dismissed."

## Novel Form of Highway Crossing Protection

AN INTERESTING type of highway crossing protection, designed to retard the speed of automobiles when approaching railway tracks, has been installed recently on the Eastern division of the Chicago & North Western about two miles west of Meadow Grove, Neb. This consists of the construction of a mound of stone in a conspicuous position in the center of the highway 100 ft. on each side, or 50 ft. beyond the limits of the right-of-way. Being located in the center of the highway these mounds are in the most conspicuous position possible. Automobile drivers are made aware of the fact that they are approaching a railroad crossing and must put forth physical effort to retard fast moving cars



A View of the Crossing

and steer them around the mound. If they then find a train approaching they still have nearly 100 ft. in which to stop, which distance is sufficient for speeds up to 30 to 35 miles per hour. This type of "retard" avoids the objection to the "humps" on account of the danger of damaging automobiles, whose drivers might not know of their presence and who might overlook or disregard the advance warning signs. In this instance the county did the grading and the railway furnished the signs and the riprap.

We are indebted for the above information to C. F. Womeldorf, division engineer, Chicago & North Western, under whose direction the crossing was built.

THE CONSTRUCTION ACTIVITY in the United States is having its effect in Quebec. The mills are kept busy on lumber for shipment to the New England and middle states. During the second week of May one company shipped 70 carloads of lumber to New York.



# Operating Characteristics of Missouri Pacific

## Good Progress Made in Rehabilitation and Financial Reconstruction of This Property

THE MISSOURI PACIFIC's corporate net after fixed charges for the year 1921 was \$3,537,016 as compared with \$3,033,075 in 1920 and with \$4,240,839 in 1919. However, the relative magnitude of these figures affords no adequate index of the results secured during the past year since the above figures for the years 1919 and 1920 take into account the compensation received from the government under the regime of the Railroad Administration and also of the six months' guarantee period immediately following. The road did not earn its rental during federal control.

A somewhat better measure of the operating results for 1920 is obtained by comparing the net after rental for the last four years. This was \$11,821,976 in 1918 and \$4,363,698 in 1919. It represented a deficit of \$4,617,009 in 1920, which was changed to a net of \$10,236,848 in 1921. In other words, the result in 1921 was an improvement as compared with the previous year of \$14,853,857.

In making this improvement in 1921 over the results for 1920, the Missouri Pacific had the advantage of a rather minor decrease in operating revenues as compared with that experienced by many other railroads, namely, 7½ per cent. Therefore, by effecting a reduction of 18.78 per cent in operating expenses as compared with 1920, it was possible to obtain a net revenue from railway operations of \$18,092,094 as compared with \$3,284,672 in 1920.

### The 1921 Results

In 1921 the Missouri Pacific carried 27,045,162 tons of freight. This compared with 33,960,017 tons in 1920 and was a reduction of 20.36 per cent. Of this total traffic, 24.37 per cent was in products of agriculture; 2.93 per cent, products of animals; 35.38 per cent, products of mines; 14.89 per cent, products of forests, and 18.92, manufactures and miscellaneous. In 1921, as against 1920, there were increases of 7.74 per cent in agricultural and 5.25 per cent in animal products. There were decreases of 25.46 per cent in products of mines; of 30.24 per cent in lumber and of 27.91 per cent in manufactures.

The freight revenues totaled \$81,660,401 or 5.64 per cent less than in 1920. The total operating revenues were \$109,745,073 as compared with \$118,721,428 in 1920, a reduction of \$8,976,356 or 7.56 per cent. The Missouri Pacific's characteristics are reflected in an average haul for the year 1921 of 238 miles. The average receipts per ton-mile in 1921 were 1.27 cents as compared with 1.07 in 1920, an increase of 18.03 per cent.

As already indicated, the system in 1921 made a reduction of 18.78 per cent in operating expenses. It operated at a ratio of 83.87 in 1921, which is considerably better than the figure of 95.45 for 1920. The operating expenses for 1921 were actually \$92,042,456 as compared with \$113,319,940 in 1920. In maintenance of equipment, the reduction was \$6,827,466 or 22.94 per cent, despite the fact that the Missouri Pacific reported only 8.2 per cent bad order cars on May 1. In maintenance of way, the reduction in expenses was \$6,617,802 or 26.74 per cent. A reduction of this proportion in the maintenance of way expenditures of any railroad always raises the question as to the possibility of some deferred maintenance.

The Missouri Pacific has a rather different position among railroads today from that which it had when it was the central link and most important part of a nearly completed transcontinental system. The intervening period, to put it in its briefest terms, has been devoted to rehabilitation and to

financial reconstruction. The Missouri Pacific has made good progress in overcoming the difficulties arising from the failure of the transcontinental project.

The Missouri Pacific System's operated mileage totals 7,300. Of this it owns 6,783 and operates 517 miles under lease or trackage rights. Its lines reach 10 states and serve a very productive territory. The main lines of the system are in two groups—the group of the original Missouri Pacific and those of the former St. Louis, Iron Mountain & Southern. The former includes the lines from St. Louis to Kansas City, from Kansas City to Omaha and from Kansas City to Pueblo, Colo. The main stem of the Iron Mountain extends from St. Louis to Texarkana, Ark., and is supplemented by the lines to Alexandria, La., from which trackage rights over the Texas & Pacific bring the Missouri Pacific into New Orleans. The line from St. Louis to Kansas City receives its importance because it is the main stem of that part of the Missouri Pacific System. From Omaha to Kansas City is a good territory because of the large livestock and dressed meat business. The line from Kansas City to Pueblo gives the system a large grain business, and a connection with the Denver & Rio Grande Western.

The Iron Mountain section is the most productive part of the system. Its Illinois division serves the coal districts of Southern Illinois, the Missouri Pacific being well situated in this field and one of the leading carriers. The Missouri Pacific also serves coal fields in Arkansas and Kansas but these are of less importance than the Illinois fields. Bituminous coal constitutes about 20 per cent of its total tonnage. The Iron Mountain line also serves a lumber territory in Arkansas and Louisiana. About 15 per cent of the total tonnage on the whole system is products of forests. A third factor in the traffic of the southern lines is agriculture—important on this line now and rapidly expanding.

The line from St. Louis to Texarkana, Ark., as already noted, is the main stem of the Iron Mountain. It is over this line that the Missouri Pacific operates its best passenger train—the Sunshine Special. This train runs from St. Louis to San Antonio, Tex., over the Missouri Pacific to Texarkana, Texas & Pacific to Longview, thence via the International & Great Northern. The line as thus mapped out is likewise an important freight route. Because of the International & Great Northern's position at Laredo, as the road which has the largest interchange business with the Mexican lines of any of the United States carriers, the route has great potential value, which should be realized when conditions in Mexico again become normal. The Missouri Pacific also operates another through freight line to the south. This uses the Illinois division to Thebes, thence by means of trackage rights over the St. Louis Southwestern tracks to Paragould and from there on it uses the Missouri Pacific rails to Alexandria, La., reaching New Orleans over the Texas & Pacific.

Not the least among the physical advantages of the Missouri Pacific is its strategic position in the St. Louis terminals, whereby it is in large measure independent of the St. Louis Terminal Railroad Association so necessary to practically all of the other trunk lines that serve the St. Louis-East St. Louis Terminal area. The Missouri Pacific, through the possession of a car ferry with convenient connections, is the only road that has its own independent river crossing at that point. It has independent trackage to a large proportion of the industries. As a result of these advantages the Missouri Pacific with a main line mileage of only about nine per cent of the aggregate main line mileage

of all the railroads entering the "Mound City," according to comparisons made late in 1920, handled nearly 20 per cent of all the carload freight and 15 per cent of l.c.l. freight in the St. Louis terminals.

The Missouri Pacific's main lines are probably as good as those of any line occupying the same territory. They are laid with 85-lb. rail, or heavier. The company's standard is 90-lb., although there is some 100-lb. rail—242 miles between Poplar Bluff, Mo., and Little Rock, Ark., on the main line to Texarkana. The remainder of this line is laid with 90-lb. rail. Rail of this weight is also laid on the larger part of the line between St. Louis and Kansas City and for a distance out of Kansas City on the lines to Omaha and Pueblo. The mileage of 90-lb. rail totals 838 and that of 85-lb. rail, 2,717. Of the system's total mileage of running tracks, 3.39 per cent is laid with 100-lb. rail; 11.74 per cent with 90-lb. rail and 38.08 per cent with 85-lb. Of the total mileage, 80.39 per cent is ballasted: 2,185 miles, or 30.62 per cent, with gravel; 1,350 miles, or 18.92 per cent, with cinders and slag; 1,913 miles, or 26.81 per cent, with zinc, chatts, etc. White oak and red oak ties are used. More recently a larger percentage of treated ties is being applied. The system has 358 miles of automatic block signals from St. Louis to Jefferson City and from St. Louis to Poplar Bluff. Manual block signals are used on most of the other main lines, the mileage of these signals totaling 2,210. Telephone dispatching is the rule on the main lines and the system has 2,909 miles of it.

#### Some Operating Details

The Missouri Pacific compiles some extremely complete statistics and it is from some of these figures covering the months from September, 1920, to December, 1921, that the following details were obtained:

The highest "out-of-pocket" cost per 1,000 gross ton-miles for the period in question was in December, 1920, when it amounted to 119.6 cents. In October, 1920, it was 99.9 cents. In October, 1921, however, it had been reduced to 81.5 cents and in December, 1921, it was 87.7 cents. The December, 1920, figure included wages amounting to 47.6. In October, 1921, this item had been reduced to 34.6 and in December, 1921, it was 35.1. There was a wage reduction effective July 1, 1921, which must be taken into consideration. In the period, however, there was a steady decrease in train service overtime. The cost per train mile for September, 1920, was 14.20 cents and for October, 1920, it was 13.89 cents. There was a gradual improvement throughout the entire year 1921, when in October of that year it had reached the low average of 9.04 cents, the marked improvement being made particularly in through freight service. Average overtime expenditure per freight train mile for the calendar year 1920 was 11.66 cents, compared with an average of 8.17 cents for the calendar year 1921. The 1920 figure for overtime per 1,000 gross ton-miles was 9.02 cents; in 1921, but 6.34 cents.

In the case of fuel, the cost per 1,000 gross ton-miles in December, 1920, was 47.8; in October, 1921, 31.3 cents and in December, 1921, 34.7 cents. This reflected a decrease in cost of coal from \$4.12 per ton in October, 1920, to \$3.50 in October, 1921. There was also a reduction in consumption by reason of greater economy for the year 1921, compared with the year 1920, based upon the unit of measure—per ton-mile—the saving in reduced consumption measured by the work performed was 128,234 tons, or \$446,000.

The unit of efficiency in yard operations is the average number of cars handled per switch engine hour. This increased from 12.5 cars in September, 1920, to 15.9 cars in October, 1921. The average for November, 1921, was 15 cars and the average for December, 1921, was 14.8 cars. The labor cost per car handled decreased from 47.4 cents in September, 1920, to 33 cents in October, 1921. The aver-

age for December, 1921, was only 35.9 cents. While a portion of this decrease was due to the reduction in wages, the substantial increase in the number of cars handled per engine hour indicates that the larger portion of the reduced cost was obtained through greater efficiency.

The unit of measure in handling merchandise in the warehouses is the average number of tons handled per man hour. In September, 1920, tons handled per man hour (truck-loaders, stowers and truckers) amounted to 0.79, while for December, 1921, the average had increased to 1.22 tons per man hour, or 54.4 per cent. The average labor cost per ton in September, 1921, was 103.2 cents. This average had decreased to 68.6 cents in December, 1921, and measuring the results for each month since September, 1920, making proper allowance for the decreased wages effective July 1, 1921, the saving for the 15 months' period amounted to \$314,000.

Transportation enginehouse expense likewise showed a marked improvement. The unit of measure in this case is man hours per engine handled. Prior to April, 1921, the Missouri Pacific statistics included both mechanical and transportation. Subsequent to April, 1921, the mechanical time was excluded, consequently the first month of exclusive transportation handling susceptible of comparison is April. The average for that month was 12.72 man hours per engine. This had decreased to 11.32 in October, 1921, the average for November and December being 11.95 and 12.00 man hours, respectively. The average labor cost decreased from \$7.47 per engine to \$5.62 per engine.

#### 1922 Improvement Program

The Missouri Pacific for 1922 has an improvement program which calls for about \$8,000,000. In this total the most important item is a \$2,000,000 double track project on the eastern division (St. Louis to Kansas City). This includes 30 miles of double track extending westward from Kirkwood, a short distance out of St. Louis. This work is required to overcome traffic congestion between St. Louis and Jefferson City, Mo. Other items in the program include a new bridge, built in connection with a levee project, at Corning, \$220,000; river protection, \$100,000; 14th Street viaduct in St. Louis, Missouri Pacific share, \$115,000; new bridge over the Osage river, \$220,000; water projects at Hoisington, Kan., \$250,000 (total cost to be \$300,000); filling in bridges on the White River division (in southwest Missouri), \$215,000; work equipment, \$325,000, etc. About 20,000 tons of new rail are to be laid.



Photo by Keystone

**Railroads Play Important Part in Recent Fighting Between Wu-Pei-fu and Chang Tso-lin in China**



# Factors Underlying Primacy of American Railways

## Importance of Developing and Maintaining the Right Relationships Between Managements and Men

THE FIFTIETH anniversary of the Railroad Y.M.C.A. was celebrated widely throughout the United States during the week beginning June 11. At the celebration in St. Louis, which included a luncheon at the Statler Hotel on June 12 and a program during the evening of the same day at the Association building, the following message was read from President Harding.

### President Harding Commends Railroad Y. M. C. A.

"The half century of progress which has characterized the work of the Railroad Department of the Young Men's Christian Association is of distinct national significance. The 125,000 members, or the approximately \$9,000,000 in buildings and equipment, or the \$6,500,000 annual expenditure, indicative as they are, do not adequately measure either the service which has been rendered in the lives, character, and efficiency of the men or the safety of life and property upon the railroads. It is a privilege to express the deep interest I have in the welfare of the great work which is done in St. Louis as well as in all parts of the United States."

On the same day a luncheon was held at the Hotel Commodore, New York, presided over by President Truesdale of the Delaware, Lackawanna & Western, and including a large gathering of railway executives and representative railway men. Addresses were made by President J. H. Hustis of the Boston & Maine; Samuel Rea, president of the Pennsylvania Lines; Dr. John R. Mott, general secretary of the International Committee of the Y.M.C.A.; L. J. Tate, conductor on the Long Island Railroad; Fred Ferguson, a trainman on the New York Central, and Ward W. Adair, secretary of the New York City Railroad Y.M.C.A.

At the close of his address Mr. Hustis said: "We recognize, too, that the old order of things has passed away and we believe that while conditions and the viewpoint of all has changed, human nature is very much as it has always been. The solution is in the restoration of confidence between men and management. The duty of finding the methods by which this can be accomplished is quite, if not more, incumbent on those managing the railroad properties than on any other agency. But whatever the method or the organization used, it must, if it is to be successful, be based on the principle for which the Railroad Association stands—that of service."

### Doctor Mott's Address

Doctor Mott spoke on the factors underlying the leadership of the railways of America, as follows:

It has been my lot to devote much of my life abroad as well as here in America to travelling work. I find myself, therefore, always at home in the midst of railway men, having spent nearly 35 years in almost incessant travel among the nations. I am prepared to appreciate sympathetically as well as with my whole mind's assent the finer aspects of this work in honor of which we meet to-day, and also lying back of that, the work of the railways themselves. Every time I come back from a foreign journey, whether from the Orient, or from the western nations, or from those that lie south of us, I have a deepened sense of appreciation of the unique and stupendous service rendered by the railways of America to the upbuilding of the life of our nation.

It is due to the railways that we have had the almost unbelievable development of the vast material resources of the American continent. It is due to the railway service, and this is often overlooked, that there has been facilitated so

largely the nation-wide dissemination of intelligence as well as the physical and social well-being of the American people. Likewise, the railways have done more than any other one factor to promote the unity of the nation. Just as the Civil War fused together forever the American states politically, so the ceaseless shuttling of the railways has made possible and done much to realize the social unification and the real spiritual solidarity of our strongly sectional and markedly cosmopolitan population. How much that means only those of us fully appreciate who travel widely over the land. Moreover, the American people do not realize the great contribution of our railways in preventing some of the great ills and perils that have well nigh undone other nations and have actually brought on some of the greatest calamities of mankind.

### Importance of Adequate Transportation

When on my recent visit to China I heard of the terrible havoc and suffering caused by the famine, I said, "How much of this might have been prevented by an adequate railway service." When in India I have found, even under the matchless administration of Britain, how great famines at times still obtain among the three hundred millions of Hindustan, and have said, "What would not be the situation were it not for the railways they have, and what is not a widely extending country saved by having an adequate railway system?" When I was in Russia in the summer of 1917 with my good friend, General Scott, sent by the President as members of the Root Mission, and we saw the crumbling of the Russian Army and the rise of Bolshevism, we recognized that the principal thing which made this great catastrophe possible was the breakdown of the means of communication. The reason why we have had to pour tens of millions of dollars worth of provisions into Russia this year to save them from starvation, and the reason why the great political distemper of Bolshevism, like a malignant disease, still eats its way into the heart of Russia, is because of insufficient transportation.

Think also of the great contribution of American railways in opening in the railway service boundless opportunity to successive millions of men for useful work and for advancement. Our railways constitute one of the greatest, if not the greatest, school of democracy we have.

Why is it that the American railways hold the primacy among the railroad systems of the nations? It is a fact familiar to those present that America has practically one-half of the railway mileage of the entire world. That, however, is not what impresses us so much as the causes which have given the railways of America their unique distinction and great achieving power.

What are some of the factors which have made the American railways great and given them leadership among the railway systems of the world? I may be far afield but I think one of the factors has been the spaciousness of the opportunity. They had a vast continent thrust upon them to be opened, settled, subdued and developed. There was something about this which appealed powerfully to the imagination and also to the adventurous and heroic in strong men. It served to call out the best that was in them. Someone might say: "Is there not a great continent in Africa? What about Siberia which is nearly three times the size of Canada or the United States?" Yes, their day will come, and I predict that the very spaciousness of those vast areas, which grew upon me as I made my long journeys over them, will

yet challenge some of the greatest minds and release the latent energies not only of the Russian people but also of other nations whose co-operation they must have.

### Why America's Railways Excel

The admitted leadership of American railways may also be explained by the freedom which they have had to evolve plans and project them through the decades, notwithstanding embarrassing and harassing restrictive legislation—legislation which in its practical effects or outworking has often proved to have been unpatriotic. When we contrast the developments on this side of the Atlantic with those in the European nations, and even more with those in Latin America, we recognize that we have had a measure of liberty that has made possible our showing what railways can do and how they can serve the interests of a great people.

Another factor that explains the greatness of our railways has been the eminent leadership which these enterprises have had. I make bold to say that there is no work in America or in any other country, which has called out among men more power of vision, more capacity for initiative, more organizing ability, that is, the ability to wield and combine men, than has the leadership of the railway systems of this country. Undoubtedly another cause has been not only the power of mentality and personality to which I have called attention, but likewise the money power. What undertaking in America or in any other nation has had so largely poured out upon it the great energies of capital, not only of the rich but also of what we might call associated poverty. What project have we today that is more truly American?

Then I like to add another factor that has made us forge to the front. That has been our power to co-operate. I remember the discerning remark of Senator Root, "You may judge the degree of advancement of a nation's civilization by its ability to co-operate with other nations." This is just as true of companies as it is of nations. Judging by this test, the railway companies of this country have evolved into a high stage of advancement and present an example of which we may be proud. We all remember the days of keen and remorseless competition, even unto warfare. It sometimes had its advantages in calling out the latent capacities of men and companies; but we have evolved, I repeat, into that state where railways, notwithstanding centrifugal energies, have shown their ability to co-operate with one another, and, what I sometimes think is even more striking, have developed unusual capacities of co-operation internally. When we think of troubles between companies and men we may at times feel depressed, and wonder whether or not this point is true, but if we contrast what we have here with what they have in certain other nations, we shall find abundant ground for encouragement and hope.

### Establishing Right Relationships

Were I to mention another factor, it would be to emphasize the general character and spirit of the men in the service from top to bottom. I do not wonder that you are proud of this service. Nor do I wonder that the thing that causes us most solicitude is the fact that at times we are conscious that there is not the desired solidarity, or the sense of the solidarity that does exist. This leads us right into the heart of what has brought us here to-day.

Among the influences that have made possible the remarkable personnel of the American railway systems is the work of the Railroad Y.M.C.A. It deserves to be ranked very high indeed if we may judge by the testimony of the railway officials. What agency has begun to do as much to promote right character, right relationships and right spirit among the men in the varied services as has the Y.M.C.A.?

The word that I suppose we heard most frequently in the war was the word "morale." You will remember the dictum of Napoleon that morale is to other factors in war as three

to one. The World War was a war of morales. You will recall that Hindenburg in the early days of the war said that the victory would ultimately be achieved by the nation that had the strongest nerves. I do not like that word as well as I like the word "morale," which represents, as I see it, the spirit of men.

It will be interesting to remind ourselves of what it was that at times tended to destroy the morale of men in the armies. War-tiredness in some cases was the cause; again it was idleness; at other times it was uncertainty or doubt; and not infrequently it was what we called enemy propaganda. These were among the principal influences. On the other hand, what were the causes that contributed most powerfully to the building up and maintaining of high morale? As I answer this question my answer will constitute in some respects the best outline I could give of the work of the Railroad Y.M.C.A., because of what this organization is striving to do along railway lines of the country is to promote the right morale, that is right the character, attitude and spirit of the men. I would, therefore, ask the question again: What were the factors in the war that did most to maintain and strengthen morale? One of them undoubtedly was the promotion of the physical comfort of the men. That is one of the great objects of the Railroad Y.M.C.A. When you think what it does with its dormitories, restaurants, rest rooms, athletic features, its homelike lounges, you understand what we mean by the physical comfort of the men. A second factor that contributed to morale was the mental and heart contentment of the men. Again you will recall vividly the entertainments, the lectures, the reading rooms of the Army Y. huts and of the Railroad Y. buildings at terminal and division points, and you recognize the full force of this point.

The right use of the leisure hours had very much to do with preserving and strengthening morale. I trace nineteen-twentieths of the troubles among young men to unaccounted-for hours—sometimes an evening off, sometimes a day, sometimes a week-end. It is to these vacant hours that I trace the lapses and falls of men. We cannot well overstate the importance of a program such as that of the Association to occupy usefully the vacant spaces in the time of men.

Another thing that contributed much to feeding the morale of men in the war was the opportunity the Association afforded them to change their minds. After spending long days and nights in the trenches, or after being on the battlefield where they witnessed scenes and had experiences which they would fain forget, or after the irksome routine of camp life, to be able to go into a bright and cheerful room and mingle with their fellows and converse with the men and women workers in charge and enjoy the diverting games and uplifting ministries to mind and spirit, was the means of transforming their whole mental outlook.

Another influence that made for morale was the consciousness the men had that they were not forgotten, that the people back at home—the citizens of their native land—believed in them, were indeed interested in them, and followed them, not simply through government taxes but through such welfare organizations as the Y.M.C.A. Tens of millions were contributed for Y huts, equipment and facilities. The same influence is exerted by the Railroad Y. with its generous backing from the companies and their stockholders and friends.

The secretarial leadership of this work has also had a profound influence. I can speak freely on this point because I am not known technically as a Railroad Y.M.C.A. secretary. But I know these secretaries and how they have spent themselves and how they count it a high honor to be of service to the railway men. They have helped immeasurably, in my judgment, to keep alive the ideals that have done so much to feed the spirit and maintain the morale of the men.



Let me emphasize as a chief factor the ministry of pure religion, the religion that St. James spoke of, pure and undefiled, which is being exemplified, lived and communicated in the religious program of these Associations. What did this not mean to men going into battles; what has it not meant to men since in the more difficult period following the armistice; what has it not meant to millions of men in the railroad service, who through these Associations have come under the wonderful, superhuman influence of Jesus Christ.

#### The Railroad Y. M. C. A.

Well, therefore, may we today, on the turning of the fiftieth milestone of the work of the Railroad Y.M.C.A., pay our tribute to this nation-wide, beneficent, efficient and fruitful organization. It has accomplished a great work. With its hundreds of Associations, with its scores of thousands of members, with its large property interests of many millions, with the backing of nearly every railway company of importance in the land, with the wise outreach of its influence to other lands, it is on the threshold of vastly greater achievements.

If I were to mention another great result that has been achieved and is being increasingly achieved, next to its influence on the character and spirit of the men, I would speak of the unifying power of the Railroad Y.M.C.A. In these recent fateful and tragic years we have witnessed an alarming development and manifestation of the divisive forces of mankind. I sometimes think the greatest problem before us for the next 15 years is the racial problem. Not only the divisive tendencies among the races but among the nations. Nor would I overlook another great divisive tendency—that in the social and industrial order. The conflict is on. What does it not mean that we have an organization which for 50 years has shown its ability, as no other society with which I am familiar, to unite in one membership, one program and one objective, the employers and employees, and this in a voluntary and not an obligatory way, with the largest possible freedom of expression and action, and, therefore, ensuring the finest and most effective cooperation? What has it not meant?

I am not surprised that the other great industries of the world have finally been convinced after watching for years this practice game of the Railway Y., and now we cannot keep up with their demand for the extension of the Y.M.C.A. work on the railway Association model to their industries. Nor should we wonder that industrial leaders in Europe and in Asia have requested that we send experts to study their fields at first hand, and to plan agencies and facilities for their service. Discerning observers recognize afresh the stabilizing and steady guiding power of this great work.

In a time of strain like the present, it assumes added meaning and importance. To my mind, we are summoned at a moment like this to expand greatly our plans. There are some things on which we have to call time, but this is not one of them. This is one of the projects from the nature

of the case that should be expanded until the helpful network of the organization is spread much more intimately over all classes of men throughout all the railways of America. We want to keep in mind what the French call "grand strategy." By grand strategy they mean that which takes in the whole map—all the fronts.

As I look over our great American Republic and notice the spaces that are without these facilities and without the helpful working of these vital and steadying processes, I say let us have grand strategy that takes in every railway system in its entirety. To this end we must expand greatly the resources for this work. So far as I can see there is no more higher multiplying use of money right now than that of relating it to these plans, to influence aright the ideals, the character, the spirit, the efficiency, the relationships, the output of the men to whom we commit such unparalleled interests of property and of human life.

### New Steel Passenger Cars for the Philadelphia & Reading

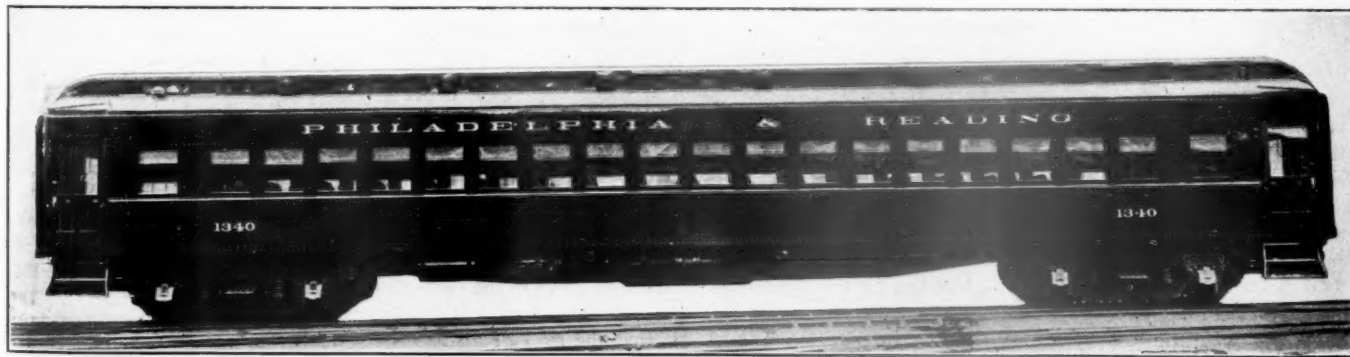
THE FIRST deliveries of cars for the Philadelphia & Reading on an order for 35 main line all-steel passenger equipment cars have been made recently by the Harlan plant, Wilmington, Del., of the Bethlehem Shipbuilding Corporation, Ltd. Thirty of the main line cars ordered from the



Interior of the Coach

Bethlehem Company are all-steel passenger coaches and five are all-steel combination passenger and baggage cars.

These cars are all 63 ft. in length, the coaches being of the wide vestibule type with a seating capacity of 78; the



New 63-ft. Steel Coaches for the Philadelphia & Reading

combination passenger and baggage cars have a seating capacity of 51. Hale & Kilburn Walkover design seats upholstered in Philadelphia & Reading standard blue plush are used in the coaches, and black fabricoid is used in the combination cars. Safety Car Heating and Lighting Company body hung electric light equipment of the latest type is installed in each car, and the same company's Thermo-Jet heating system is used. Current for lighting is furnished by the Electric Storage Battery Company's 300 ampere hour, type No. 13 batteries. Gould buffers and draft gear, Pitt couplers and Westinghouse universal control air brakes are part of each car's equipment.

The interiors of both coaches and passenger compartments of the combination cars are plain steel finished in imitation mahogany, and the baggage compartments are painted and enameled buff color on the side walls with the upper and lower decks painted and enameled white. The interiors of all cars are insulated with three-ply Salamander, and the headlining is of fire-proof agasote painted to harmonize with the interiors. The exteriors are painted Philadelphia & Reading standard body color with gold lettering. Each car is equipped with four-wheel Commonwealth cast steel trucks with 36 in. forged steel wheels and clasp brakes designed by the builder.

In addition to the above order the Harlan plant also has under construction for the Philadelphia & Reading 50 all-steel cars for suburban traffic, 45 of these being passenger cars and five combination passenger and baggage. These cars are designed to have strength equal to the main line cars and are in every respect high grade cars for suburban traffic.

## President Asks Arbitration of Coal Strike

WASHINGTON, D. C.

**A** PLAN FOR a settlement of the coal strike by arbitration and an immediate resumption of mining was proposed by President Harding on Monday, July 10, to the conference of coal operators and union leaders which he had summoned to Washington and which had been in a state of deadlock for the week during which they had been holding meetings among themselves and in the presence of Secretaries Hoover, Davis and Fall. The plan was not immediately accepted, however. The mine union leaders said it would be necessary to first hold a meeting of their policy committee, which was called for Saturday, and the representatives of the operators also asked for further time for consideration.

The President proposed that the mine workers return to work on the scale of wages which expired last March 31 and which would be continued in effect until August 10. A coal commission would be created at once, consisting of three members selected by the mine workers, three selected by the mine operators and five to be named by the President, all decisions of the commission to be accepted as final. This commission would determine, if possible, within 30 days a temporary basic wage scale for the miners on strike, which would be effective until March 1, 1923. In event that the commission is unable to report this scale by August 10, it would have power to direct continued work on the 1922 scale until the superseding scale is ready. The commission would also investigate exhaustively every phase of the coal industry, and the President promised to ask Congress to confer authority for the most thorough investigation and make appropriations necessary for the work. The commission would be asked to make recommendations looking to the establishment and maintenance of industrial peace in the coal industry, the elimination of waste due to intermittency and instability, and suggest plans for a dependable fuel supply.

The President in addressing the conference said that the government required the parties to the dispute to settle it among themselves. The government could not settle it for them and it will force no man to work against his free will, nor force men to employ men against the free exercise of an employer's rights.

The operators in a statement to the press pointed out that they had already proposed that a committee of operators and miners be charged with the grouping of the districts where possible and mutually agreeable, and that a board of arbitration be set up by the President in each group or district to report on or before August 1. They also suggested that a board be appointed by the President to state the fundamental problem of the bituminous coal industry and to make recommendations. The proposals of the operators, however, were promptly rejected by the union.

## Pere Marquette Valuation

WASHINGTON, D. C.

**T**HE INTERSTATE Commerce Commission in its tentative valuation report on the Pere Marquette, as of June 30, 1915, finds a final value of \$63,309,242 for the property used, including the leased lines, the Grand Rapids, Kalkaska & Southeastern, Huron & Western and Chicago & West Michigan, and \$60,522,576 for the property owned. The used property covers 1,829.99 miles of first main track and 2,613.97 miles of all tracks. Lines operated in Canada are excluded.

The outstanding capitalization on the valuation date was \$108,837,176 of which the report says \$7,125,790 is only a nominal liability due to securities held by or for the carrier and \$101,711,386 constituted the actual liability to the public. The investment in road and equipment, including land, was stated by the carrier to be \$87,100,296 but the report says that if certain readjustments were made the balance in this account would be decreased to \$80,179,569.

The original cost to date cannot be fully ascertained, the report says, and no data supported by accounting records are obtainable as to the cost to predecessors of the carrier in creating and improving 838 miles of road now owned by the carrier. For creating the remaining 951 miles of road owned by the carrier on the date of valuation and for improving all the property owned, the report gives the recorded money outlay as \$38,272,894 and the outlay in securities as \$14,542,499, but says that from these items should be deducted certain amounts not definitely ascertainable representing expenditures on lines not now owned. The cost of reproduction new of the common carrier property other than land used is given as \$66,730,170 and the cost of reproduction less depreciation as \$50,103,559. The present value of the carrier lands is given as \$7,511,647 and the value of materials and supplies on hand as \$1,196,533.

**ECONOMIC ASPECT OF POOR VISION.**—In the examination of more than 10,000 employees in factories and commercial houses, 53 per cent were found with uncorrected faulty vision and 13 per cent had defects which were corrected, making a total of 66 per cent with defective eyes. This is the summary of a report of studies made by the Eye Sight Conservation Council of America, headquarters Times Building, New York city. In one manufacturing establishment over 70 per cent were found with eye defects. As an example of inefficiency and resulting waste, 20 per cent of the inspectors in a large factory were found to be unable to see sufficiently well to detect defects in the product they were inspecting. More attention has been given to the perfecting of machinery than to the correcting of physical defects in the workman. Every manager should see to it that the eyes of all associated with him are corrected to compensate for defects. It will pay from a purely business standpoint.



## Freight Car Loading

WASHINGTON, D. C.

THE NUMBER of cars loaded with revenue freight for the week ended July 1, which was the last week before the 10 per cent reduction in freight rates took effect, as well as the last week before the shopmen's strike, was 876,896, or 960 less than the total for the preceding week. This was, however, an increase of over 100,000 as compared with the corresponding week of 1921, when the loading was 776,079 and only 14,725 less than the loading for the corresponding week of 1920, which was 891,621, although the coal loading was 62,365 cars less than in 1921 and 98,286 less than in 1920. Coal loading showed a decrease of over 2,000 cars as compared with the week before. There were increases

as compared with the last year in all classes of commodities except coal, but there were decreases as compared with the week before in grain and grain products, live stock, coal, forest products and merchandise l.c.l. Increases as compared with 1920 were shown in the Pocahontas, Southern and North Western districts. The summary as compiled by the Car Service Division of the American Railway Association is given in the table below.

The freight car surplus for the period June 15 to 23 showed a further reduction to 255,685, which included 160,733 surplus coal cars and 62,577 box cars and for the period June 23 to 30 there was a further reduction to 239,225, which included 60,101 box cars and 147,558 coal cars. There were also scattering shortages amounting to some 4,803 cars.

### REVENUE FREIGHT LOADED

SUMMARY—ALL DISTRICTS, COMPARISON OF TOTALS THIS YEAR, LAST YEAR, TWO YEARS AGO. WEEK ENDED SATURDAY, JULY 1, 1922

Districts	Year	Grain and grain products	Live stock	Coal	Coke	Forest products	Ore	Mdse. L.C.L.	Miscellaneous	Total revenue freight loaded		
										This year 1922	Corresponding year 1921	Corresponding year 1920
Eastern .....	1922	10,006	2,796	7,856	2,084	5,437	7,125	70,441	93,993	199,738	.....	.....
	1921	6,585	2,509	43,021	866	4,867	2,522	57,694	70,334	.....	188,398	218,267
Allegheny .....	1922	2,271	2,651	18,630	4,753	3,164	11,213	51,675	75,683	170,040	.....	.....
	1921	2,115	2,087	47,288	2,223	2,591	6,711	43,602	49,042	.....	155,659	172,073
Pocahontas .....	1922	169	145	31,331	254	1,489	29	6,465	4,111	43,993	.....	.....
	1921	119	116	24,681	107	1,309	14	4,983	3,965	.....	35,294	35,263
Southern .....	1922	3,734	2,126	23,167	1,281	19,349	1,264	37,598	40,031	128,550	.....	.....
	1921	3,018	1,597	19,120	382	14,902	485	35,546	37,102	.....	112,152	121,836
Northwestern .....	1922	10,093	8,189	5,415	1,567	16,816	42,693	30,817	40,451	156,041	.....	.....
	1921	10,143	6,961	5,677	490	11,574	19,513	28,239	32,338	.....	114,935	153,875
Central Western .....	1922	10,623	10,297	5,279	256	6,559	2,053	34,199	48,429	117,695	.....	.....
	1921	13,277	9,364	13,754	178	6,067	729	31,810	37,707	.....	112,886	128,272
Southwestern .....	1922	5,001	2,342	3,070	166	8,608	399	15,916	25,337	60,839	.....	.....
	1921	5,437	1,890	3,572	145	6,255	792	14,645	24,019	.....	56,755	62,035
Total Western districts..	1922	25,717	20,828	13,764	1,989	31,983	45,145	80,932	114,217	334,575	.....	.....
	1921	28,857	18,215	23,003	813	23,896	21,034	74,694	94,064	.....	284,576	344,182
Total, all roads.....	1922	41,897	28,546	94,748	10,361	61,422	64,776	247,111	328,035	876,896	.....	.....
	1921	40,694	24,524	157,113	4,391	47,565	30,766	216,519	254,507	.....	776,079	.....
	1920	34,051	27,063	193,034	9,657	55,665	71,672	157,651	342,828	.....	.....	891,621
Increase compared .....	1921	1,203	4,022	.....	5,970	13,857	34,010	30,592	73,528	100,817	.....	.....
Decrease compared .....	1921	.....	.....	62,365	.....	.....	.....	.....	.....	.....	.....	.....
Increase compared .....	1920	7,846	1,483	.....	704	5,757	.....	89,460	.....	.....	.....	.....
Decrease compared .....	1920	.....	.....	98,286	.....	.....	6,896	.....	14,793	14,725	.....	.....
July 1 .....	1922	41,897	28,546	94,748	10,361	61,422	64,776	247,111	328,035	876,896	776,079	891,621
June 24 .....	1922	38,411	29,934	96,960	9,466	64,271	64,284	249,193	325,337	877,856	775,447	911,503
June 17 .....	1922	39,333	29,151	92,136	9,302	64,082	53,822	248,044	324,902	860,772	775,328	916,736
June 10 .....	1922	40,035	29,765	94,824	9,008	62,358	46,372	248,405	315,235	846,002	787,283	930,976
June 3 .....	1922	37,931	27,792	86,626	8,927	58,923	31,552	217,254	281,640	750,645	693,903	828,907

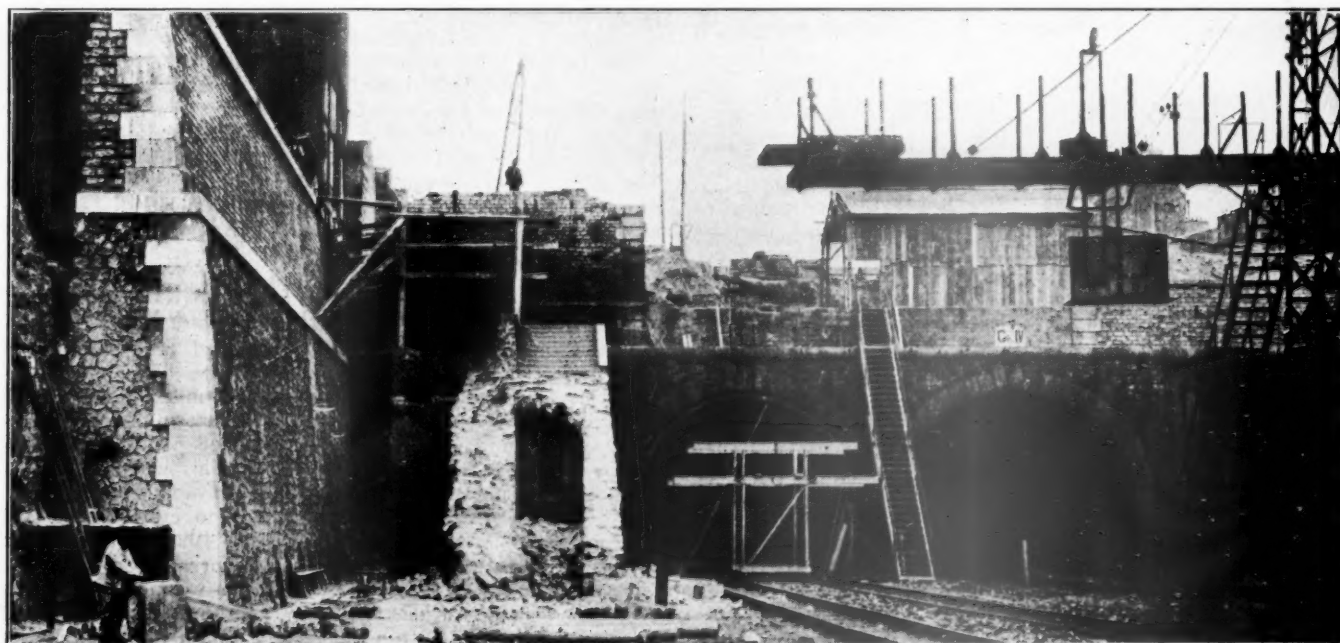


Photo by Kadel &amp; Herbert

Batignolles Tunnel, Paris, the Scene of Disastrous Accidents, Being Converted into an Open Cut

## General News Department

**The Missouri Pacific "Scenic Limited,"** westbound from St. Louis to California, collided head-on with a local freight train near Kansas City, Mo., resulting in the death of five persons and the injury of forty.

**The Delaware & Hudson** and the New York, Ontario & Western railroads were on July 2 blocked by a flood between Carbondale, Pa., and Jermyn, 4 miles, for the fourth time within four weeks. The total damage done by this latest flood is estimated at more than \$1,000,000.

**The feasibility of motion pictures** on a moving train was demonstrated on June 17 on train No. 3 of the Illinois Central, operating between Chicago and New Orleans. A curtain was hung at one end of the dining car with the chairs rearranged to face it. The passengers were then invited to the diner and a three-reel film was shown. The current for the projector was taken from the regular lighting circuit.

**Members of Congress** have received complaints from commercial organizations on the Pacific Coast and from other parts of the country against the alleged activity of the officials of the Southern Pacific regarding the Supreme Court decision ordering the merger of the Southern Pacific and the Central Pacific dissolved. The Peninsula Bureau of Chambers of Commerce and Associations, which met at Redwood City, California, petitioned members of Congress outlining the attitude of those commercial bodies against any reversal of the Supreme Court ruling in the dissolution case. Another petition was received from the Omaha Chamber of Commerce in which it is charged that "the Southern Pacific Company is making a determined effort, by appeals to senators and members of Congress, to nullify the effect of the decision of the Supreme Court in the Central Pacific case, requiring a separation of the Central Pacific Railroad from the Southern Pacific Company."

### General Foremen's Convention

The International Railway General Foremen's Association has announced a tentative program for its convention to be held in Chicago, September 5-8 as follows: Repairs to Steel Cars and Appliances for Doing the Work; Labor Saving Devices in the Locomotive and Car Departments; Methods of Increasing Shop Output, and Engine Failures and Their Remedies.

### A Correction

In an article entitled, "Large Size Boiler Plates," published on page 1620 of the *Railway Age* of June 20, 1922, the size of the boiler plates for the Southern Pacific 2-10-2 type locomotives was incorrectly stated as 223 in. by 150 in. by  $\frac{3}{8}$  in. The actual sizes of the plates for the crown and side sheets were 247½ in. by 195½ in. by  $\frac{3}{8}$  in. and for the wrapper sheets, 291 in. by 149 in. by  $\frac{3}{8}$  in.

### Quarterly Circular on Loss and Damage

The freight claim division of the American Railway Association has recently issued its quarterly circular on freight loss and damage expenditures as divided among the principal causes and commodities for the three months ending March 31. This statement shows a decrease of 49.2 per cent in the amount charged to loss and damage as compared to the same period in 1921. Members are urged to study their own cause and commodity ratios as they fluctuate from month to month, for the reason that an increase in the ratio, as compared to previous months, is indicative that decreases in that cause or commodity are not keeping pace with the list as a whole. The total loss and damage expenditure recorded for this three-month period is \$14,852,103.

### Interesting Colored Firemen in Fuel Economy

In connection with the fuel economy campaign on the Central of Georgia a meeting of colored firemen was recently held at Columbus, Ga., at which an address was delivered by Dr. M. L. Taylor. Dr. Taylor is a physician, one of the prominent colored citizens of Columbus and one who exerts a great deal of influence with the members of his race. It is sometimes difficult to secure the interest of colored firemen and Dr. Taylor's talk, which was widely commented on and was published in the *Right Way Magazine*, has served as a further encouragement to these employees in the efforts to save fuel.

### Electric Power for the Pennsylvania

Electric energy, purchased from the Philadelphia Electric Company, will be used for the operation of the West Jersey and Seashore Electric line which runs between Camden and Atlantic City. An agreement has been reached between the Pennsylvania, which controls the West Jersey, with the electric company for the necessary work of building a connecting line. The power now used is generated by the railroad at its Westville plant. It has not been decided whether this plant will be abandoned or maintained for auxiliary and emergency purposes.

To obtain power from the new source, the Pennsylvania will run a line across its Delaware river bridge and connect with the West Jersey at Westville. The power line after reaching Delair, N. J., across the river from Bridesburg, will follow the old Haddonfield-Westville cut-off to Westville.

### Annual Safety Congress Next Month

The Eleventh Annual Safety Congress will be held in Detroit, Mich., from August 28 to September 1. In the past this conference, which is promoted by the National Safety Council, a co-operative non-commercial organization of men, industries and communities interested in the prevention of accidents, has annually brought together 3,000 or more persons who are actively engaged in safety work in both the United States and Canada. This year invitations will be sent to 15,000 executives and safety workers and a large attendance is expected. Complete discussions of the various phases of industrial and public safety will be conducted at the meetings of the 20 different sections into which the council's activities are divided. These meetings will cover safety problems in a wide variety of fields. The steam railroad section will hold sessions on Tuesday and Wednesday, August 28 and 29. The subjects covered will include "Safety and Publicity," "Accident Prevention from the Standpoint of the Operating Department," "Report of Progress—Careful Crossing Campaign" and "Safety as Seen from the Pulpit."

### Train Control on the Pennsylvania

The Pennsylvania Railroad has arranged with the Union Switch & Signal Company for the installation of continuous induction, full-speed train control system on 45 miles of single track and five miles of double track between Lewistown, Pa., and Sunbury. Alternating current track circuits and position light signals will be installed at the same time. This will require that a 4,400-volt, single-phase, 60-cycle transmission line be built. Speed control apparatus is being applied to eight freight and four passenger locomotives. It is expected that the installation will be completed and in full operation before fall.

This will be the first extensive installation working on the continuous induction principle. This system requires that a signal be transmitted to a train to permit it to proceed, while non-receipt of a signal results in stopping of the train. As continuous track circuit protection is installed, this provides that the train will be under control at all times, occupying or entering the main track



equipped with the installation. No apparatus is required along the roadway, as rails are used to conduct the signaling current which operates the engine apparatus, and the switch opened ahead of the train or another train backing into the block will cause the apparatus to be applied immediately. This system will provide against excessive and dangerous speed being attained and is designed with the intention of at no time relieving the engineman of responsibility for proper handling of his train.

### Thirty-One Cars of Chocolate

The Pennsylvania Railroad calls attention to a second "Prosperity Special" which passed over its lines this week, a train-load of chocolate. It is said to be the largest single shipment of chocolate ever made by rail in the history of the candy-making industry, 1,250,000 lb., chiefly of what is known as confectioners' "covering" chocolate, in 10-pound cakes. It completely fills 31 box cars. The train left the works of the Stollwerck Chocolate Company at Stamford, Conn., on July 1, and moved by way of the Hellgate bridge to Greenville, N. J., Philadelphia and Pittsburgh. The western candy trade feels the revival of business. Five of the cars go to Denver, Col.; three each to Cincinnati, O., and Portland, Oregon; two each to St. Paul, Minn., and Sioux City, Iowa; and one each to Newark, O., Dayton, O., Muskegon, Mich., Galesburg, Ill., Freeport, Ill., St. Louis, Mo., St. Joseph, Mo., La Crosse, Wis., Fond du Lac, Wis., Minneapolis, Minn., Burlington, Iowa, Sioux Falls, S. D., Ottumwa, Iowa, Pueblo, Col., Pennsylvania Railroad estimates that the candy of which this a pound box to each one of five million American girls. Cleveland, O., and Milwaukee, Wis. The statistician of the chocolate will become a constituent will be sufficient to furnish

### Wage Statistics, April, 1922

For April, 1922, the number of employees reported by Class I railroads was 1,578,133, an increase of 7,975, or 0.5 per cent over the number reported for the preceding month, according to the monthly bulletin of the Interstate Commerce Commission. Owing to a decrease in the number of the higher paid employees, the total compensation decreased \$13,291,337, or 6.1 per cent.

Compared with those for March, 1922, the returns for April, 1922, indicate the following increases or decreases (D) by groups of employees:

Executive officials, and staff assistants.....	21
Professional, clerical, and general.....	D1,170
Maintenance of way and structures.....	31,045
Maintenance of equipment and stores.....	D8,394
Transportation (other than train, engine, and yard).....	D789
Transportation (yardmasters, switch tenders, and hostlers).....	D688
Transportation (train and engine service).....	D12,070
Net increase.....	7,975

A comparison of the number of employees and their compensation, by months, for the period covered by the new classification follows:

Month	Number of employees	Total compensation
July, 1921.....	1,634,872	\$214,339,385
August, 1921 <sup>1</sup> .....	1,679,927	227,745,895
September, 1921 <sup>1</sup> .....	1,718,330	223,972,822
October, 1921 <sup>1</sup> .....	1,754,136	237,602,959
November, 1921 <sup>1</sup> .....	1,732,353	225,304,006
December, 1921 <sup>1</sup> .....	1,637,151	214,921,396
January, 1922 <sup>1</sup> .....	1,552,014	205,178,639
February, 1922 <sup>1</sup> .....	1,545,040	194,523,427
March, 1922 <sup>1</sup> .....	1,570,158	216,704,408
April, 1922.....	1,578,133	203,413,071

<sup>1</sup> Excludes Detroit, Toledo & Ironton Railroad.

### The N. Y. C.'s "Canned" Safety Speech

The New York Central is circulating a "canned speech" which is being read before all kinds of public gatherings, in furtherance of the "Cross Crossings Cautiously," campaign.

This speech, which takes four minutes to deliver, already has been read at sessions of commercial organizations, Rotary clubs, automobile clubs, in motion picture theaters and even to church congregations assembled at their worship. The speech was written by Marcus A. Dow, general safety agent of the New York Central. The address follows in part:

"Approximately 1,800 persons are killed on railroad grade crossings throughout the country each year and about 5,000 sustain painful and crippling injuries. In the last 30 years the country's population has increased only 68 per cent, while fatal crossing accidents have increased 345 per cent and injury cases

have increased 652 per cent. About 75 per cent of the persons killed and injured in these deplorable railway crossing accidents are occupants of automobiles.

"There are at present over 251,000 railroad grade crossings in the United States. To eliminate all of these crossings by grade separation would require a sum of money in excess of \$12,500,000,000. Constant work is being done in this direction, and 399 grade crossings were eliminated in 1919, but even at this rate it would take 629 years to abolish all the crossings of the country.

"The only solution of the problem is in safety education. A railroad crossing, no matter whether or not it is protected, is a place of danger where no chances must be taken. If you are driving a car, slow down approaching every railroad crossing, look carefully both ways before entering upon the tracks, and do not proceed until you have made sure that no train is approaching from either direction. If a train is coming—*WAIT*. Do not attempt to cross ahead of it. Many lives have been snuffed out because the driver of a car thought he could beat the train to the crossing and the race was a tie.

"To 'stop, look and listen' is about the best piece of advice that was ever written. This remedy for crossing accidents is sure and is within the reach of everyone. It takes only a little thought, a little care, and perhaps a moment's time to use it."

### Railway Returns for May

The Class I railroads of the United States in May had a net operating income of \$61,980,600, which on an annual basis represented a return of 4.36 per cent on their tentative valuation. In May last year their net operating income amounted to \$36,943,248, or at the annual rate of return of 2.60 per cent, while in April this year it was \$50,271,865, or 3.93 per cent. The net operating income fell \$19,680,500 below a return of 5¼ per cent, the figure fixed by the Interstate Commerce Commission in its recent rate decision as representing a fair return.

Operating revenues in May totaled \$448,947,900, an increase of nine-tenths of 1 per cent over the same month last year, while operating expenses totaled \$355,588,800, a decrease of 6.4 per cent.

Fifty-six railroads—27 in the Eastern, 2 in the Southern and 27 in the Western district—had operating deficits in May, compared with 59 in April.

For the first five months this year the net operating income of the railroads totaled \$273,259,000, compared with \$94,417,907 during the same period last year. This is at the annual rate of return of 4.36 per cent (the same as for the month of May) compared with 1.51 per cent during the first five months in 1921. The operating revenues for the five months period totaled \$2,137,339,700, a decrease of 3½ per cent compared with the corresponding period last year, while operating expenses totaled \$1,714,688,900, a decrease of 13½ per cent.

The railroads in the Eastern district had operating revenues in May of \$218,955,300, a reduction of 1 per cent, while the operating expenses totaled \$173,147,700, which was a reduction of 7.4 per cent. Their net operating income was \$31,752,380, compared with \$20,801,715 in May the year before. The net operating income for the month was at the annual rate of return of 4.57 per cent.

The railroads in the Southern district had operating revenues of \$61,778,800, an increase of 12.6 per cent compared with May, 1921. Operating expenses totaled \$46,257,700, a reduction of 6.7 per cent, while their net operating income was \$11,304,700, compared with \$2,064,841 during the same month last year. This was at the annual rate of return of 6.63 per cent.

The operating revenues for the carriers in the Western district totaled \$168,213,700, a decrease of three-tenths of 1 per cent compared with the same month last year, while their operating expenses totaled \$136,183,360, a decrease of 5 per cent. Their net operating income totaled \$18,923,500, compared with \$14,076,692 in May, 1921. This is at the annual rate of 3.41 per cent.

There was an increase of approximately 3½ per cent in the number of freight cars loaded with all commodities in May, compared with the same month in 1921. Because of the coal strike coal loading fell off 47.4 per cent, but there was an increase in the loading of all commodities other than coal of 16.8 per cent. Measured by net ton miles there was a decrease in freight traffic in May of eight-tenths of 1 per cent compared with the same month last year.

## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Operating ratio.	Net from railway operations.	Operating income (or loss).	Net after rentals.	Net after rentals 1921.
		Freight.	Passenger.	Total.	Way and structures.	Equip-ment.	Traffic.					
Akron, Canton & Youngstown.....	May 170	\$190,527	\$1,325	\$191,852	\$21,376	\$16,710	\$6,465	53.50	\$92,867	\$81,867	\$49,562	\$18,818
Albany & Vicksburg.....	5 mos. 170	829,545	7,112	836,657	85,024	90,892	27,532	54.50	329,132	350,045	299,275	23,370
Albany & Vicksburg.....	May 141	216,048	57,200	273,248	57,162	61,616	8,947	79.30	290,526	37,574	37,819	37,819
Albany & Vicksburg.....	5 mos. 141	937,196	268,594	1,205,790	227,478	255,228	43,474	82.40	1,065,736	122,439	137,534	92,576
Vicksburg, Shreveport & Pacific.....	May 171	212,393	92,656	305,049	112,949	13,758	10,817	82.90	56,041	37,173	24,355	37,381
Ann Arbor.....	5 mos. 171	984,030	441,873	1,425,903	300,445	239,740	51,544	82.70	265,122	168,771	126,646	14,546
Ann Arbor.....	May 293	323,252	37,765	361,017	47,855	82,535	10,362	75.80	107,109	84,309	61,181	15,013
Ann Arbor.....	5 mos. 293	1,701,719	204,222	1,905,941	224,735	334,326	47,293	78.00	418,391	315,066	204,076	11,992
Atchafalaya, Topeka & Santa Fe.....	May 855	10,216,987	3,514,489	13,731,476	3,558,063	3,462,904	275,645	80.30	2,973,244	1,896,766	2,025,978	4,503,341
Atchafalaya, Topeka & Santa Fe.....	5 mos. 857	45,395,108	16,571,095	61,966,203	11,611,666	17,315,657	1,307,623	80.40	13,318,267	8,161,200	8,796,847	9,802,349
Gulf, Colorado & Santa Fe.....	May 1,907	1,189,555	329,637	1,519,192	392,847	441,280	47,788	93.40	108,443	22,360	43,785	846,548
Gulf, Colorado & Santa Fe.....	5 mos. 1,907	6,021,915	1,474,203	7,496,118	2,012,614	2,286,483	209,064	95.80	342,649	20,456	302,086	884,028
Panhandle & Santa Fe.....	May 857	446,043	115,605	561,648	199,133	230,146	7,871	110.00	59,925	82,733	116,251	64,585
Panhandle & Santa Fe.....	5 mos. 857	2,193,122	511,508	2,704,630	709,669	1,009,569	33,558	98.80	33,565	80,955	239,560	48,892
Atlanta & West Point.....	May 93	107,435	69,032	176,467	23,944	45,223	7,979	84.00	32,961	22,507	15,289	20,403
Atlanta & West Point.....	5 mos. 93	476,752	333,284	810,036	113,923	209,688	38,453	86.00	131,743	82,829	45,195	36,338
Western of Alabama.....	May 133	132,494	66,311	198,805	22,946	47,806	8,609	70.10	66,706	53,283	54,528	28,516
Western of Alabama.....	5 mos. 133	562,269	305,054	867,323	123,230	236,716	42,267	81.90	177,661	133,957	133,628	42,867
Atlanta, Birmingham & Atlantic.....	May 639	268,251	32,053	300,304	63,505	89,407	22,731	104.60	15,398	8,758	14,935	182,278
Atlanta, Birmingham & Atlantic.....	5 mos. 639	1,248,703	155,741	1,404,444	291,266	441,377	106,319	111.10	176,678	245,243	307,219	833,276
Atlantic Coast Line.....	May 4,921	4,728,003	1,128,786	5,856,789	768,537	1,250,936	102,453	69.10	1,975,578	1,703,262	1,537,558	11,606
Atlantic Coast Line.....	5 mos. 4,923	21,698,454	7,364,794	29,063,248	3,429,430	5,770,444	693,512	68.70	9,873,657	8,537,036	7,889,105	3,195,198
Charleston & Western Carolina.....	May 342	250,535	36,845	287,380	54,151	36,283	7,137	70.20	91,021	79,889	68,118	30,350
Charleston & Western Carolina.....	5 mos. 342	1,202,229	179,495	1,381,724	227,582	189,509	33,452	73.50	384,580	328,965	281,052	128,395
Baltimore & Ohio.....	May 5,235	13,387,564	2,180,939	15,568,503	1,900,791	4,009,596	299,066	78.00	3,716,858	2,984,053	2,504,487	1,685,449
Balti. & Ohio Chicago Term.....	May 5,235	65,454,980	10,460,982	75,915,962	9,863,328	18,037,358	1,477,280	78.80	17,176,627	13,627,890	11,913,963	7,309,331
Balti. & Ohio Chicago Term.....	5 mos. 91	.....	.....	.....	46,367	30,865	2,014	84.20	42,856	8,541	101,406	834
Balti. & Ohio Chicago Term.....	5 mos. 91	1,187,211	166,841	1,353,952	166,841	157,645	9,787	91.00	107,350	123,859	469,411	136,172
Staten Isl. Rapid Transit.....	May 23	78,387	111,315	189,702	68,114	25,530	2,657	103.30	226,594	29,659	42,356	14,999
Staten Isl. Rapid Transit.....	5 mos. 23	412,533	448,579	861,112	235,243	157,781	9,822	108.60	81,362	165,889	235,111	187,533
Bangor & Aroostook.....	May 625	729,449	67,723	797,172	143,833	130,769	4,709	60.40	325,464	261,150	265,111	22,926
Bangor & Aroostook.....	5 mos. 625	3,430,656	381,978	3,812,634	563,775	617,937	20,865	59.40	1,592,730	1,291,827	1,296,440	319,749
Belt Ry. of Chicago.....	May 32	.....	482,697	482,697	52,509	48,750	2,131	64.40	171,852	138,474	134,664	142,315
Belt Ry. of Chicago.....	5 mos. 32	.....	2,389,946	2,389,946	200,109	263,795	9,612	66.30	805,601	626,691	697,027	671,266
Bessemer & Lake Erie.....	May 225	534,661	26,610	561,271	159,305	279,143	14,684	121.90	127,972	160,673	128,806	63,799
Bessemer & Lake Erie.....	5 mos. 225	3,031,406	150,373	3,181,779	503,423	4,129,393	76,822	102.70	87,697	251,428	96,011	670,594
Bingham & Garfield.....	May 34	15,710	.....	15,710	14,619	4,178	1,291	105.30	226,594	29,659	42,356	14,999
Bingham & Garfield.....	5 mos. 34	58,545	6	58,551	86,521	17,667	6,393	262.80	95,625	122,448	79,997	84,286
Boston & Maine.....	May 2,287	4,093,889	6,545,487	10,639,376	1,080,996	1,212,123	70,807	83.30	1,093,879	860,666	555,352	228,429
Boston & Maine.....	5 mos. 2,287	19,596,373	8,520,415	28,116,788	4,702,934	6,009,447	280,650	86.60	4,212,363	3,276,867	2,008,258	4,336,017
Brooklyn Eastern Dist. Term.....	May 9	123,213	.....	123,213	4,021	19,780	150	58.00	54,424	47,836	47,836	30,656
Brooklyn Eastern Dist. Term.....	5 mos. 9	632,093	.....	632,093	24,699	99,594	807	59.70	270,185	238,201	238,201	127,382
Buffalo & Susquehanna.....	May 253	50,953	.....	50,953	33,257	27,500	1,861	169.30	41,674	44,924	36,120	3,001
Buffalo & Susquehanna.....	5 mos. 253	609,299	32,342	641,641	152,276	204,909	10,747	125.13	12,513	3,774	91,622	15,086
Buffalo, Rochester & Pittsburgh.....	May 589	710,722	124,163	834,885	342,925	342,925	19,714	106.40	56,616	91,783	56,527	84,902
Buffalo, Rochester & Pittsburgh.....	5 mos. 589	5,096,933	660,375	5,757,308	618,908	2,128,594	84,811	120.80	33,924	466,339	593,416	302,011
Canadian Pacific (Lines in Me.).....	May 233	134,339	25,309	159,648	64,858	34,368	4,250	83.60	214,086	134,086	70,790	45,585
Carolina, Clinchfield & Ohio.....	May 295	619,662	40,457	660,119	163,587	163,117	26,332	65.50	232,023	191,906	288,057	206,487
Carolina, Clinchfield & Ohio.....	5 mos. 295	2,928,734	180,559	3,109,293	379,934	744,372	117,610	67.30	1,036,052	835,584	1,184,500	776,138
Central of Georgia.....	May 1,920	2,264,868	392,574	2,657,442	1,859,850	2,793,937	73,572	80.70	359,756	278,917	296,429	58,184
Central of Georgia.....	5 mos. 1,916	5,963,410	1,953,034	7,916,444	1,158,705	1,721,789	338,273	80.80	1,681,375	1,256,103	1,344,697	55,713
Central of New Jersey.....	May 688	2,403,397	755,840	3,159,237	484,994	1,007,157	46,001	93.50	220,117	40,134	93,532	484,118
Central of New Jersey.....	5 mos. 688	15,128,785	3,352,127	18,480,912	2,013,481	5,559,745	174,404	83.40	3,277,064	1,977,000	1,794,240	2,385,224
Central Vermont.....	May 407	450,629	75,387	526,016	116,170	71,102	10,217	82.20	104,775	87,148	64,185	202,871
Central Vermont.....	5 mos. 407	1,936,682	435,383	2,372,065	335,768	481,967	56,332	90.90	238,601	153,047	23,452	732,598
Chesapeake & Ohio.....	May 2,547	6,416,481	904,891	7,321,372	949,940	2,042,837	78,274	76.80	1,778,101	1,508,752	1,573,436	1,597,163
Chesapeake & Ohio.....	5 mos. 2,547	29,782,264	3,929,841	33,712,105	3,753,316	8,181,179	375,423	76.70	8,221,096	6,878,229	7,192,118	3,096,565
Chicago & Alton.....	May 1,050	1,386,271	533,934	1,920,205	380,201	687,025	56,222	94.60	115,575	1,780,027	1,065,745	64,284
Chicago & Alton.....	5 mos. 1,050	8,519,008	2,415,909	10,934,917	1,212,627	3,262,477	277,800	81.80	215,861	1,780,027	1,065,745	64,284
Chicago & Eastern Illinois.....	May 945	1,338,345	364,095	1,702,440	233,371	510,835	39,266	89.80	187,982	102,584	102,584	47,409
Chicago & Eastern Illinois.....	5 mos. 945	7,394,162	1,993,732	9,387,894	1,077,201	2,550,267	209,066	83.80	1,602,638	1,175,124	1,058,680	1,175,124
Chicago & Northwestern.....	May 8,402	8,178,811	2,336,928	10,515,739	2,070,466	2,452,001	126,351	84.10	1,863,353	1,133,971	1,058,680	1,175,124
Chicago & Northwestern.....	5 mos. 8,402	36,671,407	11,495,005	48,166,412	11,909,276	11,909,276	722,192	73.40	3,296,040	4,129,819	3,942,072	4,461,094
Chicago, Burlington & Quincy.....	May 9,393	9,003,917	2,187,488	11,191,405	1,919,171	2,292,656	204,554	73.40	3,296,040	2,356,753	2,231,975	1,754,142
Chicago, Burlington & Quincy.....	5 mos. 9,393	45,625,522	10,391,377	56,016,899	7,350,329	13,194,339	902,612	75.60	15,033,174	10,424,712	9,883,033	8,332,193



## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Operating ratio.	Net from railway operations.	Operating income (or loss).	Net after rentals 1921.
		Freight.	Passenger.	Total (inc. misc.)	Maintenance of way and structures.	Equip- ment.	Traffic.				
Chicago Great Western.....	May 1,496	\$1,470,537	\$337,037	\$1,807,574	\$405,937	\$466,169	\$61,702	91.90	\$1,818,874	\$81,137	\$57,540
Chicago, Ind. & Louisville.....	5 mos. 1,496	6,713,809	1,280,951	7,994,760	1,222,437	2,333,707	316,758	90.20	8,327,013	498,792	113,629
Chicago, Ind. & Louisville.....	May 654	916,767	288,392	1,205,159	160,756	311,903	36,183	76.00	324,738	260,263	160,335
Chicago, Ind. & Louisville.....	5 mos. 654	4,578,235	1,264,750	5,842,985	667,099	1,427,901	159,828	75.80	1,548,243	1,235,264	58,525
*Chicago Junction.....	May 12	292,669	36,667	329,336	18,518	123,330	8,811	64.20	104,752	59,397	106,970
Chicago River & Indiana.....	5 mos. 12	2,045,955	213,250	2,259,205	169,873	22,579	3,292	67.20	2,089,332	423,359	771,782
Chicago River & Indiana.....	May 38	197,269	23,885	221,154	22,579	3,292	3,027	68.30	62,560	48,137	78,462
Chicago, Milwaukee & St. Paul.....	May 11,030	9,054,033	1,872,315	10,926,348	2,003,616	3,266,189	183,397	86.60	1,645,578	841,012	473,318
Chicago, Milwaukee & St. Paul.....	5 mos. 11,030	42,394,571	9,166,438	51,561,009	7,114,326	15,957,315	909,313	89.10	6,274,015	2,256,699	402,050
Chicago, Peoria & St. Louis.....	May 246	171,497	15,359	186,856	17,474	1,47,043	10,384	104.60	208,479	18,664	35,385
Chicago, Peoria & St. Louis.....	5 mos. 246	802,808	101,975	904,783	132,178	208,301	21,168	102.70	990,732	73,213	181,608
Chicago, Rock Island & Pacific.....	May 7,661	6,691,638	2,177,864	8,869,502	1,539,370	2,222,631	181,964	81.30	1,798,323	1,260,776	1,010,909
Chicago, Rock Island & Pacific.....	5 mos. 7,661	31,736,818	10,134,864	41,871,682	5,860,822	10,365,423	867,043	84.50	7,039,316	4,391,714	3,187,937
Chicago, Rock Island & Gulf.....	May 461	293,759	77,849	371,608	82,235	149,154	14,296	92.00	338,185	22,877	5,443
Chicago, Rock Island & Gulf.....	5 mos. 461	1,617,325	371,958	1,989,283	294,465	428,718	67,928	86.90	287,088	228,186	141,281
Chic., St. Paul, Minn. & Omaha.....	May 1,749	1,574,947	464,915	2,039,862	290,050	467,340	73,191	84.10	350,404	209,468	170,677
Chic., St. Paul, Minn. & Omaha.....	5 mos. 1,749	7,406,183	2,432,965	9,839,148	1,319,555	2,087,768	361,598	86.30	1,453,126	794,428	629,472
Cincinnati, Indianapolis & Western.....	May 347	282,630	51,836	334,466	45,309	79,189	10,660	85.70	50,819	55,468	12,309
Cincinnati, Indianapolis & Western.....	5 mos. 347	1,333,257	242,043	1,575,300	209,621	377,673	54,560	91.00	150,202	80,998	385,380
Colorado & Southern.....	May 1,099	241,591	152,369	393,960	982,303	122,334	9,333	89.10	107,500	41,416	10,827
Colorado & Southern.....	5 mos. 1,099	3,833,558	700,268	4,533,826	501,617	1,133,327	64,730	79.50	1,066,127	674,888	564,508
Ft. Worth & Denver City.....	May 456	534,359	174,774	709,133	174,774	348,359	34,812	62.60	348,317	235,822	238,108
Ft. Worth & Denver City.....	5 mos. 456	2,557,998	807,496	3,365,494	328,457	689,282	56,762	69.43	1,093,812	897,438	916,218
Wichita Valley.....	May 256	57,639	23,921	81,560	5,388	12,684	54	80.10	70,724	11,093	1,210
Wichita Valley.....	5 mos. 256	343,962	102,757	446,719	107,398	213,327	254	80.10	17,593	11,093	2,221
Columbus & Greenville.....	May 220	93,121	25,499	118,620	125,834	12,273	7,641	75.50	118,139	89,092	19,610
Columbus & Greenville.....	5 mos. 220	418,580	136,611	555,191	588,475	136,202	42,161	72.40	34,691	29,116	42,377
Delaware & Hudson.....	May 887	1,900,480	247,533	2,148,013	248,720	524,745	93,978	84.00	92,032	70,532	269,186
Delaware & Hudson.....	5 mos. 887	13,706,605	1,335,301	15,041,906	2,363,134	4,271,726	210,632	87.70	2,151,149	1,710,318	1,616,187
Delaware, Lack. & Western.....	May 994	3,517,662	1,126,601	4,644,263	516,145	809,576	157,951	87.00	4,279,982	352,981	422,532
Delaware, Lack. & Western.....	5 mos. 994	21,539,443	5,236,266	26,775,709	3,081,341	6,356,027	549,219	79.40	6,269,528	4,033,994	4,314,325
Denver & Rio Grande Western.....	May 2,593	1,831,536	399,630	2,231,166	408,089	642,586	47,365	82.10	432,938	277,674	320,275
Denver & Rio Grande Western.....	5 mos. 2,593	8,975,293	1,854,566	10,829,859	1,630,299	2,470,106	222,169	76.60	2,747,239	1,971,296	1,769,160
Denver & Salt Lake.....	May 255	18,324	13,178	31,502	36,748	47,781	911	228.90	47,364	-56,364	-23,433
Denver & Salt Lake.....	5 mos. 255	405,337	70,972	476,309	513,860	160,547	138,486	103.60	18,271	-63,281	-24,822
Detroit & Mackinac.....	May 385	115,995	25,113	141,108	39,584	51,868	2,366	99.70	489	-10,835	-9,728
Detroit & Mackinac.....	5 mos. 385	443,687	136,460	580,147	629,776	125,058	10,570	111.20	70,589	-123,928	-131,583
Detroit & Toledo Shore Line.....	May 61	256,266	258,639	514,905	19,601	22,039	2,338	55.10	116,321	102,321	42,506
Detroit & Toledo Shore Line.....	5 mos. 61	1,486,875	1,499,106	2,985,981	140,725	104,077	10,833	47.40	787,677	717,636	388,179
Detroit, Toledo & Ironton.....	May 454	868,661	92,239	960,900	889,503	133,003	5,553	71.70	251,321	236,421	106,690
Detroit, Toledo & Ironton.....	5 mos. 454	3,475,204	47,534	3,522,738	454,915	725,787	29,271	70.10	1,069,510	996,382	582,109
Duluth & Iron Range.....	May 294	315,922	13,713	329,635	124,868	91,776	1,236	99.20	2,888	-39,804	-35,454
Duluth & Iron Range.....	5 mos. 294	673,945	78,912	752,857	859,399	323,124	5,638	163.20	543,106	-617,114	-608,403
Duluth, Missabe & Northern.....	May 309	521,790	37,565	559,355	600,500	250,888	126,844	97.60	14,124	-164,966	-168,855
Duluth, Missabe & Northern.....	5 mos. 309	2,613,216	195,968	2,809,184	1,165,660	635,015	15,551	190.30	1,451,456	-1,459,030	-1,041,814
Duluth, South Shore & Atlantic.....	May 591	244,317	83,983	328,300	357,928	97,616	6,111	102.80	-9,880	-42,886	-126,036
Duluth, South Shore & Atlantic.....	5 mos. 591	998,221	387,268	1,385,489	1,523,116	281,743	32,609	108.40	-128,237	-281,507	-401,083
Duluth, Winnipeg & Pacific.....	May 178	128,031	18,312	146,343	151,357	33,396	4,331	94.90	7,704	1,629	-40,005
Duluth, Winnipeg & Pacific.....	5 mos. 178	653,347	95,998	749,345	126,239	198,642	23,224	95.60	33,906	-10,397	-21,750
Elgin, Joliet & Eastern.....	May 459	1,709,994	1,709,994	3,419,988	169,919	402,899	11,119	60.50	761,060	638,379	485,658
Elgin, Joliet & Eastern.....	5 mos. 459	7,946,794	1,709,994	9,656,788	676,852	1,737,282	60,938	59.30	3,569,797	3,139,024	2,537,421
El Paso & Southwestern.....	May 1,139	673,217	146,439	819,656	158,009	264,100	25,465	73.10	233,963	137,897	96,467
El Paso & Southwestern.....	5 mos. 1,139	3,059,857	791,247	3,851,104	750,888	708,031	137,181	71.90	1,165,686	685,173	563,857
Erie.....	May 2,039	5,291,346	1,085,798	6,377,144	867,668	2,104,577	138,279	92.32	540,388	247,053	439,772
Erie.....	5 mos. 2,039	29,523,730	5,121,353	34,645,083	3,658,020	10,424,193	678,721	87.30	4,765,608	3,446,968	4,113,558
Chicago & Erie.....	May 269	852,316	54,576	906,892	108,789	119,203	21,087	65.59	335,391	280,301	137,376
Chicago & Erie.....	5 mos. 269	4,043,593	245,692	4,289,285	458,883	657,483	99,672	74.37	1,166,986	903,703	471,282
New Jersey & New York.....	May 45	17,741	104,256	121,997	16,373	17,578	1,461	81.93	22,850	19,850	-7,860
New Jersey & New York.....	5 mos. 45	102,856	478,734	581,590	69,043	88,698	6,495	85.18	89,718	74,496	-50,004
New York, Susq. & Western.....	May 135	195,512	61,564	257,076	53,557	66,433	4,239	103.30	-10,080	-35,615	-48,285
New York, Susq. & Western.....	5 mos. 135	1,129,754	294,666	1,424,420	280,013	280,013	18,212	89.50	172,650	46,749	-189,804
Florida East Coast.....	May 764	897,571	244,199	1,141,770	158,026	190,042	8,790	56.90	563,167	499,593	435,718
Florida East Coast.....	5 mos. 764	4,232,590	2,208,346	6,440,936	874,736	988,315	75,913	57.30	3,096,994	2,793,832	2,509,350

\*The property of the Chicago Junction Ry. Co. was leased to the Chicago River &amp; Indiana R. R. Co. May 19, 1922. The report for the Chicago Junction Ry. Co. covers operations to that date only.

## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Operating ratio.	Net from railway operations.	Operating income (or loss).	Net after rentals.	Net after rentals 1921.
		Freight.	Passenger.	Total (inc. misc.)	Maintenance of way and structures.	Traffic.	Transportation.					
Fort Smith & Western.....	249	\$92,464	\$24,776	\$117,240	\$23,437	\$4,968	\$44,887	81.70	\$23,425	\$17,575	\$9,221	\$4,629
Galveston Wharf.....	249	439,230	103,083	542,313	122,659	24,343	228,816	91.70	48,985	19,784	20,266	71,091
Georgia.....	13	.....	.....	.....	58,608	3,683	28,205	90.30	757	16,245	16,601	88,657
Georgia & Florida.....	328	289,527	94,232	383,759	40,171	68,554	185,728	79.60	85,346	77,995	78,590	390,310
Georgia & Florida.....	328	1,349,332	449,386	1,798,718	194,239	348,003	97,432	86.80	257,000	220,933	231,527	81,593
Grand Trunk Western.....	405	86,752	11,436	98,188	13,641	14,327	39,461	82.10	22,558	16,166	11,621	29,233
Atlantic & St. Lawrence.....	405	431,347	57,609	488,956	84,187	91,735	212,399	87.90	63,893	32,334	1,713	122,608
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	4,612,226	692,553	5,304,779	473,817	1,353,885	2,699,880	87.20	727,322	412,899	504,342	830,588
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,710	133,392	1,211,102	69,740	226,557	109,649	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	960,490	164,841	1,125,331	189,517	194,704	686,027	87.20	35,239	49,305	422,674	450,484
Chic., Det. & Canada Gr. Tr. Jct. May.....	346	1,077,738	129,910	1,207,648	125,241	268,142	554,401	79.80	260,289	198,310	28,298	29,545
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MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922

[illegible]

## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Maintenance of way and structures			Operating expenses			Operating ratio.	Net from railway operations.	Operating income (or loss).	Net after rentals, 1921.	
		Freight.	Passenger.	Total (inc. misc.)	Equip. structures.	Way and structures.	Traffic.	Transp. portation.	General.	Total.					
Cumberland Valley & Mart.	33	\$37,916	\$5,783	\$47,739	\$10,628	\$15,745	\$1,172	\$27,802	\$3,643	\$38,990	121.60	—\$11,251	—\$18,150	\$35,403	
Grand Rapids & Indiana.	5 mos.	346,594	29,431	393,107	42,302	90,288	4,287	152,096	12,607	301,580	76.70	91,527	66,153	139,657	
Long Island	5 mos.	513,561	131,123	705,424	146,550	212,048	14,315	358,708	17,402	749,153	106.20	338,709	—72,791	—32,748	
Md., Dela. & Va.	5 mos.	2,414,257	729,212	3,413,207	481,526	965,477	68,482	1,809,304	121,298	3,447,850	101.00	—3,643	—157,134	—123,719	
N. Y., Phila. & Norfolk.	398	724,399	1,657,638	2,666,564	334,221	1,057,785	13,060	1,067,908	63,610	1,958,474	73.40	708,090	530,700	174,331	
Pitts., Cin., Chic. & St. Louis.	5 mos.	3,611,982	6,424,975	11,047,338	1,337,851	2,079,135	69,849	5,198,778	290,731	9,064,967	82.10	1,982,371	1,585,222	—500,924	
West Jersey & Seaboard.	5 mos.	72,061	20,567	95,417	12,890	34,678	1,513	67,335	2,571	118,987	124.70	—23,570	—26,667	—6,636	
N. Y., Phila. & Norfolk.	82	278,909	81,876	35,846	43,554	137,084	4,990	270,775	11,741	468,144	124.60	—92,298	—95,316	—49,462	
Pitts., Cin., Chic. & St. Louis.	122	555,319	80,675	699,632	65,002	142,796	7,079	322,562	12,739	558,560	79.80	141,072	121,557	—155,477	
West Jersey & Seaboard.	5 mos.	2,435	6,137,568	1,650,064	8,642,305	927,366	2,444,190	119,037	3,302,751	201,317	6,856,050	79.30	1,786,255	1,246,033	—432,857
Peoria & Pekin Union.	5 mos.	2,435	26,936,892	7,640,091	38,610,668	3,616,653	10,486,592	555,287	15,743,061	1,023,567	31,746,762	82.20	2,663,906	1,439,695	—53,063
Pere Marquette	5 mos.	359	430,791	561,130	1,080,086	154,771	192,116	14,632	456,343	25,015	853,987	79.10	226,099	162,418	37,135
Philadelphia & Reading.	5 mos.	359	1,835,374	2,407,446	756,994	986,099	72,460	2,272,443	130,095	4,273,451	92.20	362,295	271,461	192,284	—490,713
Atlantic City	5 mos.	19	8,263	130,617	56,400	13,733	56,400	105	52,523	9,107	131,868	101.00	—1,251	4,996	21,333
Pittsburgh & Shawmut.	5 mos.	19	68,115	761,207	124,453	90,869	579	311,661	45,177	573,279	75.30	124,453	124,453	13,746	
Pittsburgh & West Virginia.	5 mos.	2,222	2,687,293	3,725,587	3,400,302	580,980	759,174	49,093	1,166,024	117,398	2,677,712	78.70	722,590	567,820	154,229
Philadelphia & Reading.	5 mos.	2,222	11,789,188	1,844,153	16,077,858	3,119,363	6,005,964	261,789	6,005,964	531,430	11,569,471	77.60	3,333,512	2,605,539	1,066,946
Atlantic City	5 mos.	1,127	4,128,078	822,846	5,335,018	831,803	1,729,127	64,883	1,580,428	148,835	4,368,980	81.70	966,038	754,186	21,876
Parkinson	5 mos.	176	129,057	225,874	363,596	52,413	42,788	3,781	193,990	4,232	297,239	86.70	7,598,886	6,587,491	1,869,043
Port Reading	5 mos.	176	583,124	784,477	1,407,375	270,809	132,487	19,562	902,755	20,655	1,345,138	95.60	69,337	47,006	49,888
Pittsburgh & Shawmut.	5 mos.	41	89,366	77,443	101,245	7,410	4,220	107	45,375	832	58,022	57.30	31,282	—39,684	—365,815
Pittsburgh & West Virginia.	5 mos.	41	409,396	36,529	463,350	34,467	20,897	537	217,376	4,450	277,920	60.00	185,430	137,592	246,692
Port Reading	5 mos.	21	29,018	36,529	86,547	34,467	20,897	537	217,376	4,450	277,920	60.00	185,430	137,592	246,692
Pittsburgh & Shawmut.	5 mos.	21	626,083	906,353	94,226	26,594	986,099	72,460	2,272,443	130,095	4,273,451	92.20	362,295	271,461	192,284
Pittsburgh & Shawmut.	5 mos.	102	32,878	38,911	24,687	13,733	56,400	105	52,523	9,107	131,868	101.00	—1,251	4,996	21,333
Pittsburgh & Shawmut.	5 mos.	102	417,315	30,238	454,722	133,470	162,823	7,319	151,086	35,689	490,687	107.80	—35,365	—35,986	80,266
Pittsburgh & West Virginia.	5 mos.	85	163,014	8,536	171,550	31,127	49,190	3,841	45,871	14,266	152,739	75.40	49,817	24,921	—5,743
Pittsburgh & West Virginia.	5 mos.	85	960,339	46,498	1,006,837	128,932	358,361	17,167	279,972	80,686	908,203	78.10	254,597	127,342	312,617
Pittsburgh & West Virginia.	5 mos.	210	63,508	5,633	72,625	19,303	47,864	1,697	33,742	6,316	108,925	150.00	—38,506	—44,080	32,993
Pittsburgh & West Virginia.	5 mos.	210	401,407	35,747	451,477	221,934	80,539	7,830	202,748	36,609	549,680	121.70	—98,203	—109,337	—97,110
Quincy, Omaha & Kansas City.	5 mos.	252	63,438	23,096	95,741	28,055	14,135	575	45,453	3,744	91,567	95.60	4,174	248	—20,020
Rich., Fredericksburg & Potomac.	5 mos.	252	273,277	117,836	431,814	17,089	82,051	4,063	215,046	11,379	459,084	106.30	—27,270	—49,118	—83,139
Rutland	5 mos.	117	598,630	256,062	1,010,806	129,490	138,890	11,029	335,375	25,759	660,425	65.30	350,381	246,560	95,621
Rutland	5 mos.	117	257,197	105,577	362,774	461,728	86,975	40,444	1,593,375	132,150	2,949,145	66.30	1,498,158	1,256,662	979,418
St. Louis-San Francisco.	5 mos.	415	1,283,353	563,069	1,846,422	437,694	459,904	41,252	1,073,634	65,022	2,084,408	91.70	187,506	85,314	109,633
St. Louis-San Francisco.	5 mos.	476	5,106,603	1,610,107	7,228,542	1,362,100	1,362,100	82,066	2,344,306	188,486	5,317,418	73.60	1,911,124	1,542,245	1,259,172
St. Louis-San Francisco.	5 mos.	4,760	22,455,620	7,059,359	31,853,630	4,534,708	6,174,716	412,019	11,748,332	949,151	23,715,573	74.50	8,138,257	6,488,857	6,514,797
St. Louis-San Francisco.	5 mos.	235	52,376	32,570	84,946	96,256	54,117	2,861	48,033	5,535	132,696	137.90	—36,440	—45,209	—5,669
St. Louis-San Francisco.	5 mos.	235	303,246	136,179	439,425	218,723	110,878	13,608	253,333	28,318	622,650	126.90	—132,022	—151,443	—173,676
St. Louis-San Francisco.	5 mos.	134	109,188	15,007	124,195	30,335	24,868	3,869	53,185	6,941	119,198	90.20	16,989	—9,231	—37,646
St. Louis-San Francisco.	5 mos.	134	533,318	73,074	639,337	156,076	123,189	18,141	278,262	33,991	608,807	95.20	30,530	20,665	—351,471
St. Louis-San Francisco.	5 mos.	968	1,214,260	125,005	1,404,548	189,971	220,308	38,877	356,875	52,691	863,713	61.50	540,835	473,491	460,293
St. Louis-San Francisco.	5 mos.	968	5,983,649	629,589	6,901,604	1,048,563	1,094,186	217,548	1,815,169	266,524	4,467,256	64.70	2,344,418	1,956,339	1,808,091
St. Louis-San Francisco.	5 mos.	807	460,211	83,266	579,131	218,416	161,920	18,959	293,392	29,754	719,283	124.20	—140,152	—164,169	—121,155
St. Louis-San Francisco.	5 mos.	807	2,206,515	419,741	2,803,441	823,987	983,987	98,123	1,501,267	152,719	3,526,479	125.80	—723,038	—813,112	—655,253
St. Louis-San Francisco.	5 mos.	739	359,235	64,643	461,254	98,122	110,879	9,657	198,789	26,399	443,409	96.10	17,845	4,195	—58,204
St. Louis-San Francisco.	5 mos.	739	1,627,798	300,223	2,067,602	467,427	584,371	47,436	1,020,634	127,444	2,244,188	108.50	—176,586	—246,960	—398,044
St. Louis-San Francisco.	5 mos.	317	74,675	17,847	102,831	15,114	13,300	2,515	37,810	6,376	75,078	73.80	27,753	8,684	18,562
St. Louis-San Francisco.	5 mos.	317	311,557	81,965	393,522	443,438	71,069	14,207	174,450	32,327	350,909	78.00	94,529	23,887	26,513
St. Louis-San Francisco.	5 mos.	3563	2,855,411	625,938	3,889,589	448,702	643,130	124,125	1,578,386	163,168	2,984,998	76.70	904,591	729,113	450,624
St. Louis-San Francisco.	5 mos.	3563	13,061,524	3,900,049	18,826,308	2,045,657	3,241,754	622,834	8,106,378	764,841	14,958,354	79.50	3,867,954	3,010,945	—67,058
St. Louis-San Francisco.	5 mos.	6,091	7,656,637	2,414,882	10,071,519	1,534,724	2,110,842	217,812	4,031,553	312,631	8,285,303	76.40	2,557,391	1,956,032	852,326
St. Louis-San Francisco.	5 mos.	6,091	35,465,200	11,417,920	46,883,120	5,069,671	7,258,120	1,038,227	20,368,404	1,625,130	40,167,284	79.40	10,442,387	8,135,278	1,044,990
St. Louis-San Francisco.	5 mos.	318	762,626	153,256	903,475	78,724	150,105	17,680	312,203	25,353	588,426				



## REVENUES AND EXPENSES OF RAILWAYS

MONTH OF MAY AND FIVE MONTHS OF CALENDAR YEAR 1922—CONTINUED

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Operating ratio.	Net from railway operations.	Operating income (or loss).	Net after rentals.	Net after rentals 1921.
		Freight.	Passenger.	Total (inc. misc.).	Maintenance of way and structures.	Equipment.	Trans- portation.					
Arizona Eastern .....	382	\$284,602	\$27,640	\$312,242	\$31,242	373,965	34,133	85.90	252,468	201,320	188,661	—15,648
Arizona Eastern .....	382	1,016,539	140,936	1,157,475	1,157,475	1,626,968	186,579	86.40	1,174,516	917,095	652,471	652,471
Atlantic S. S. Lines .....	5 mos.	858,832	47,600	906,432	906,432	1,233,686	24,033	81.50	206,504	162,859	137,506	—51,309
Atlantic S. S. Lines .....	5 mos.	4,250,835	261,116	4,511,951	4,511,951	5,809,452	117,226	80.30	1,143,586	922,488	736,301	—105,863
Galveston, Harris, & S. Ant. ....	1,379	1,357,871	371,823	1,729,694	1,729,694	2,422,783	707,034	81.80	1,022,660	36,474	26,668	—560
Galveston, Harris, & S. Ant. ....	1,379	6,359,602	1,799,501	8,159,103	8,159,103	10,433,370	1,136,569	80.60	1,062,333	74,293	14,138	—65,023
Houston & Texas Central .....	May	276,584	271,551	548,135	548,135	68,046	72,331	82.10	58,281	39,256	41,617	76,027
Houston & Texas Central .....	5 mos.	4,000,603	1,440,308	5,440,911	5,440,911	7,797,492	531,751	75.60	439,409	302,440	295,141	206,495
Houston, East & West Texas .....	191	188,299	41,469	229,768	229,768	307,066	30,706	81.80	106,233	36,474	26,668	—560
Houston, East & West Texas .....	5 mos.	191	883,176	1,074,355	1,074,355	1,311,071	143,477	80.60	106,233	74,293	14,138	—65,023
Louisiana Western .....	May	220,838	80,790	301,628	301,628	68,046	72,331	82.10	58,281	39,256	41,617	76,027
Louisiana Western .....	5 mos.	1,256,835	420,833	1,677,668	1,677,668	2,327,164	44,731	75.60	439,409	302,440	295,141	206,495
Morgan's La. & Tex. R. R. & S. S. May	400	438,186	139,663	577,849	577,849	757,864	161,128	94.60	34,145	—13,768	—8,098	—4,392
Morgan's La. & Tex. R. R. & S. S. May	400	2,227,840	728,318	3,000,158	3,000,158	3,834,552	83,259	94.40	181,579	—53,175	—129,103	—307,540
Morgan's La. & Tex. R. R. & S. S. May	400	463,046	156,555	619,601	619,601	783,276	103,319	92.20	51,825	29,616	5,692	231,128
Morgan's La. & Tex. R. R. & S. S. May	507	2,687,122	757,864	3,444,986	3,444,986	4,660,476	55,127	86.30	501,261	384,988	227,598	564,678
Spokane International .....	165	67,983	11,458	79,441	79,441	84,582	17,610	80.60	16,389	10,904	4,189	17,913
Spokane International .....	5 mos.	371,218	52,944	424,162	424,162	539,366	30,366	75.10	110,604	83,108	49,492	89,517
Spokane, Portland & Seattle .....	May	421,773	138,605	560,378	560,378	636,609	20,727	77.60	221,362	137,055	122,948	128,948
Spokane, Portland & Seattle .....	5 mos.	1,888,326	616,275	2,504,601	2,504,601	3,284,422	99,378	67.20	898,845	477,711	418,647	300,367
Tennessee Central .....	292	159,892	43,372	203,264	203,264	266,866	14,361	123.90	—51,818	—56,468	—73,435	—71,830
Tennessee Central .....	5 mos.	704,569	197,480	902,049	902,049	1,168,869	25,310	96.80	31,523	9,898	—78,722	—238,596
Term. R. R. Assn. of St. Louis .....	37	.....	.....	381,204	381,204	484,465	1,078	66.50	127,877	69,651	189,711	193,144
Term. R. R. Assn. of St. Louis .....	5 mos.	.....	.....	1,900,451	1,900,451	3,606,688	623,512	64.40	676,895	414,611	992,176	797,009
East St. Louis Connecting .....	1	.....	.....	179,640	179,640	13,793	306	44.80	—99,080	90,973	80,601	34,333
East St. Louis Connecting .....	5 mos.	371,218	52,944	424,162	424,162	539,366	30,366	47.90	436,267	371,752	330,381	116,312
St. Louis McHite. Br. Term. ....	9	.....	.....	281,595	281,595	342,400	952	75.60	68,705	51,165	76,361	72,877
St. Louis McHite. Br. Term. ....	5 mos.	1,503,237	196,908	1,699,145	1,699,145	2,232,637	132,889	70.90	436,728	338,165	443,728	182,212
St. Louis Transfer Ry. ....	6	.....	.....	62,820	62,820	10,954	176	81.30	11,755	11,769	3,452	38,617
St. Louis Transfer Ry. ....	5 mos.	308,119	48,354	356,473	356,473	454,005	953	79.00	64,749	63,063	23,175	177,675
Texas & Pacific .....	1,952	1,609,390	577,725	2,187,115	2,187,115	2,439,096	46,803	77.60	533,119	432,507	379,358	227,298
Texas & Pacific .....	5 mos.	8,109,153	2,777,850	10,886,993	10,886,993	13,834,964	233,049	85.60	1,704,208	1,127,664	778,459	542,491
Toledo, Peoria & Western .....	May	69,251	43,509	112,760	112,760	151,273	25,173	109.10	—11,179	—22,202	—26,897	—68,000
Toledo, Peoria & Western .....	5 mos.	363,617	233,279	596,896	596,896	745,512	142,622	104.60	—29,996	—85,396	—105,066	—237,718
Toledo, St. Louis & Western .....	May	830,508	26,019	856,527	856,527	1,090,051	20,155	63.30	342,481	294,036	252,620	88,094
Toledo, St. Louis & Western .....	5 mos.	4,377,768	125,127	4,502,895	4,502,895	5,988,650	108,450	67.90	1,281,793	1,046,722	955,510	224,534
Trinity & Brazos Valley .....	368	139,721	18,555	158,276	158,276	164,761	48,113	104.30	—7,034	—14,035	—29,530	7,557
Trinity & Brazos Valley .....	5 mos.	1,282,996	104,929	1,387,925	1,387,925	1,440,273	351,167	87.20	184,216	149,092	—122,183	—112,168
Ulfater & Delaware .....	May	59,680	31,281	90,961	90,961	131,069	22,450	93.60	8,370	2,367	—1,719	—36,252
Ulfater & Delaware .....	5 mos.	289,643	111,356	400,999	400,999	559,037	88,442	96.00	22,157	—8,106	—26,348	—121,410
Union .....	45	.....	.....	1,015,672	1,015,672	74,613	193,896	65.60	349,208	335,378	393,481	140,146
Union .....	5 mos.	5,746,757	1,466,591	7,213,348	7,213,348	9,379,149	1,031	75.40	953,619	886,959	1,176,061	516,875
Union Pacific .....	3,707	27,161,756	6,392,010	33,553,766	33,553,766	37,705,254	8,358,739	71.60	2,264,482	1,697,389	1,670,650	2,188,682
Oregon Short Line .....	2,359	2,035,308	426,231	2,461,539	2,461,539	2,678,967	638,340	71.30	10,629,890	7,790,759	7,618,411	7,845,175
Oregon Short Line .....	5 mos.	10,556,235	2,022,476	12,578,711	12,578,711	13,576,279	4,389,238	84.00	427,411	153,213	135,819	180,065
Oregon Wash. R. R. & Nav. ....	May	1,326,495	447,461	1,773,956	1,773,956	2,197,756	443,023	75.00	3,390,567	2,014,875	1,906,342	757,327
Oregon Wash. R. R. & Nav. ....	5 mos.	7,359,966	2,066,271	9,426,237	9,426,237	10,355,677	2,111,608	101.30	—27,736	—298,713	—281,531	—28,461
St. Joseph & Grand Isl. ....	258	224,684	28,317	253,001	253,001	270,306	56,403	96.40	370,409	—535,894	—917,584	—851,831
St. Joseph & Grand Isl. ....	5 mos.	1,072,272	126,932	1,199,204	1,199,204	1,270,701	191,707	87.70	33,169	15,454	3,433	—21,903
Utah .....	102	117,043	546	117,589	117,589	120,460	35,893	83.50	209,210	120,383	78,823	—28,254
Utah .....	5 mos.	588,256	4,151	592,407	592,407	601,498	1,151	77.50	27,083	20,927	5,681	—1,5786
Virginian .....	526	1,802,279	63,425	1,865,704	1,865,704	1,993,370	117,339	70.30	178,490	144,793	89,500	12,863
Virginian .....	5 mos.	7,573,457	308,325	7,881,782	7,881,782	8,415,944	905,084	59.40	3,414,039	2,885,417	2,949,921	836,071
Wabash .....	2,472	3,730,871	808,742	4,539,613	4,539,613	4,900,012	1,488,828	53.40	896,811	705,367	432,659	274,236
Wabash .....	5 mos.	18,289,571	3,510,231	21,800,802	21,800,802	23,668,213	4,785,494	83.20	3,910,981	2,959,981	1,629,491	886,189
Western Maryland .....	804	1,107,758	71,845	1,179,603	1,179,603	1,283,036	445,406	75.50	311,081	271,081	259,189	242,012
Western Maryland .....	5 mos.	6,102,278	358,361	6,460,639	6,460,639	6,972,468	893,733	75.20	1,728,374	1,498,374	1,304,907	1,214,589
Western Pacific .....	1,045	608,522	185,196	793,718	793,718	866,010	196,622	89.60	90,130	3,451	36,903	3,667
Western Pacific .....	5 mos.	3,026,609	708,643	3,735,252	3,735,252	4,025,499	692,748	90.50	383,164	—48,963	—105,234	314,666
Wheeling & Lake Erie .....	511	1,033,021	70,760	1,103,781	1,103,781	1,190,790	212,445	75.90	286,428	168,465	162,341	282,516
Wheeling & Lake Erie .....	5 mos.	4,782,491	345,871	5,128,362	5,128,362	5,476,278	787,566	76.00	1,314,650	765,589	664,857	90,922

### Conference on Help for K. C. M. & O.

An effort to find ways for extending help to the Kansas City, Mexico & Orient, whose receiver has stated that the road cannot continue operation much longer without assistance, was made at a conference between Chairman McChord and Commissioners Meyer and Potter, of the Interstate Commerce Commission, Receiver Kemper, traffic officers of connecting roads and representatives of the state commissions of Kansas, Texas and Oklahoma at Washington on July 12, but without definite result. Another conference will be held in Chicago on July 18. Various possible ways of tiding over the road until it can recover from the effect of three drought years, high prices, etc., were discussed, ranging from the remission of taxes and the hope of discovering oil along its line to an increase in its divisions and the diversion of traffic from other lines. A formal complaint asking an order extending the latter forms of relief is now before the commission and a hearing has been held but it was represented that the condition of the road was such that it could not await the outcome of these cases. One of the traffic officers brought out that shippers have something to say about the routing and that one shipper of livestock would not allow the Orient to be used for his shipments for fear that he could not collect in case of loss or damage. The question of increased divisions was considered at length and a committee was appointed to examine the figures of revenues and divisions. The conference was called by Chairman McChord, who had invited the governors of the states through which the road operates, but they sent representatives.

Commissioner Meyer, in a letter to two Texas Congressmen who had asked for an investigation, discussed the situation of the Orient as follows:

"You suggest 'an immediate investigation.' The Orient Railroad has been and still is under investigation in the sense that many months ago, prior to the making of a loan, we investigated its financial, traffic, and operating conditions. We now have pending before us two proceedings relating to routing of traffic and divisions, respectively, which have recently been heard and which will be disposed of at the earliest possible date.

"We are fully conscious of the dependence of thousands of people upon this railroad. The situation in which many may find themselves is tragical. We have been and are doing everything within our power under the law to be of assistance in working out this extremely difficult situation. However, Congress has not authorized us to make donations to a railroad company which may be in severe financial distress. We have made the Orient a loan under section 210 of the transportation act. We are not authorized by law to reach into the public treasury to relieve suffering, no matter how acute it may be. We will soon have exhausted all our resources under the law. Furthermore, we have conferred with other departments of the government in the hope of finding a way of rendering still further financial assistance. Thus far we have been unable to find it.

"This leads me to inquire whether the communities served by the Orient and the thousands of people dependent upon it have exhausted all their resources in rendering assistance to this railroad with a view of keeping it permanently in operation. The states, the counties, and the municipalities in which it operates have an immediate and direct interest in this property and it may be that it is possible for those authorities to render assistance in ways that have not thus far been considered and resorted to.

"We are advised that the Director General has made final settlement with the Orient. Under the provisions of the transportation act we made partial payments to the Orient on April 7, June 12, August 4, August 25, and October 21, 1920, respectively. These payments aggregated \$916,000. They were made as large as we could lawfully make them. Since these partial payments were made, representatives of the carrier and of this commission have at various times conferred with respect to the determination of the amount due in final settlement of the guaranty provisions of the transportation act, under which the above-mentioned partial payments were made. The carrier is now in default of interest on the government loan of \$2,500,000 by \$75,000. The maximum amount which we may be able to certify to the Treasury as payable to the carrier in final settlement will probably not exceed the amount of the interest in default by more than about \$40,000. A certificate for whatever amount may be determined as due will be issued in the immediate future.

"What, if anything, can be accomplished in the two other proceedings pending remains to be seen, although it is safe to assume

that no substantial financial assistance may emanate from that source in the immediate future or before July 1.

"Whether Congress can devise ways and means of keeping this railroad in operation in the event that the receiver should be unable to do so, is for you gentlemen who constitute Congress to decide.

"My official contact with the Orient has created in me the impression that its original construction was spectacularly speculative and an invitation to disaster. I am losing no sympathy over the speculators who prematurely created this railroad and those who personally and officially encouraged them to do so. However, I have the most profound sympathy for the people who have built their homes, schools, churches, and places of business along the line and who are dependent upon it. If there is a way to save and protect them, that way should be found.

"In this connection I can not refrain from remarking that in spite of tragedies like those of the Orient, which may be found in every part of this country, we are constantly being appealed to and importuned to authorize the construction of certain new railroads which in all probability, if constructed, would end in disaster. If such disaster should strike only those who are clamoring to be permitted to take the risk, authority might conceivably be granted; but the real sufferers will be the people, largely innocently persuaded, who may make their home in localities dependent upon the success of the enterprise.

"Please regard this letter as my individual expression. I sincerely hope the Orient will continue to operate."

### "The Railroad and the Auto Truck"

An evolution is taking place in the transportation of the country that does not seem to be attracting the attention which it deserves. The automobile is elbowing the railroad out of service in many respects. Railroad officials and investors do not seem to realize and legislators do not seem to understand that it is useless to make appropriations for hard roads and have them smashed to pieces by heavy trucks that are transporting freight between industrial points. Millions and millions of tons of freight which formerly went by rail are now transported by automobiles. The highways are sustained at public expense. The railroad is compelled to build its own thoroughfare, buy its own right of way and, in cases where it occupies a public street, pay compensation. Is the competition between the two modes fair?

A great deal of dissatisfaction is manifested toward the railroad and many people are wondering why it is that its returns are so small as compared with what they were years ago when there was less freight to transport and millions of dollars were paid in rebates. Now no money is returned to the shipper by the railroad and all shippers are supposedly treated alike. Why should the state build a hard road costing as much per mile as a great steel thoroughfare and not compel the motor truck transportation company to pay a proper remuneration for the use of it? Why should thousands of citizens be compelled to pay special assessments to have the street in the front of their residences pounded to pieces by those who aimlessly chase about in automobiles, hardly knowing where they are going and knowing less about how to operate the cars, to say nothing of the business vehicle? One reason why there are so many automobile accidents is because so many people are operating cars who have not the experience necessary for the protection of their own lives and their own property or the lives and property of others who are using the streets.

Something ought to be done. Many railroads are slipping financially. Vast sums are being expended in hard roads without proper provision being made for keeping these roads in repair. The glamour of the railroad has disappeared and the enthusiasm now centers around the automobile. The average citizen has his mind on a new form of transportation and the public through its officials and legislative bodies should recognize this sentiment and prepare to meet new conditions.

The railroad cannot be obliterated on account of its ability to compete for the long-haul business and something should be done to dovetail the two forms of transportation, one dealing with long hauls and the other with short hauls. One is as important as the other and it seems that the transportation company which will bring these two methods of transportation into juxtaposition will have solved the question. Either the automobile companies should own the railroads or the railroads should control transportation.—*Manufacturers' News.*



## Traffic News

The Cleveland, Cincinnati, Chicago & St. Louis on June 25 put on a new passenger train each way between Chicago and Indianapolis, Ind. The new trains will leave each city at 5 p. m. and arrive at the opposite terminal at 10 p. m.

On July 1 the Texas & Pacific inaugurated double dining car service on its "Sunshine Special" operating between El Paso, Tex., and Memphis, Tenn. It is said that two diners were necessary during the heavy summer travel in order that the passengers would not be delayed in getting their meals.

On July 10, the Wabash and the Delaware, Lackawanna & Western inaugurated additional sleeping car service between Chicago and Scranton, Pa., operating eastbound on Wabash train No. 6 and Lackawanna train No. 2, and westbound on Lackawanna No. 5 and Wabash train No. 1. This arrangement also gives the Wabash through sleeping-car service on train No. 3, leaving Buffalo at 7:45 a. m. and arriving at Detroit at 1:45 p. m., and Chicago at 9:50 p. m.

### Coal Production

Production during the fourteenth week of the strike was interrupted by the Independence Day Holiday. The total output of bituminous coal will probably fall between 3,500,000 and 4,000,000 tons, and even the average production per working day will show a decrease, according to the Geological Survey bulletin. Production of anthracite remains practically zero.

Complete returns for the thirteenth week (June 26-July 1) indicate an output of 5,207,000 tons of bituminous coal and 25,000 tons of anthracite, a total of 5,232,000 tons, of all coal. In the corresponding week of 1921 bituminous mines produced 7,660,000 tons and the anthracite mines 1,870,000 tons, a total of 9,530,000 tons. In 1920, a year of active business, the total coal raised was 12,064,000 tons. Considering anthracite and bituminous coal as a common source of supply, it will be seen that present production is running from 5,000,000 to 6,000,000 tons behind normal.

The record of daily loadings of cars of bituminous coal clearly discloses the effect of the Fourth of July holiday. On Saturday, July 1, 12,614 cars were loaded as against 13,993 cars on the preceding Saturday. On Monday only 11,165 cars were loaded. On Independence Day itself production ceased almost entirely, and the recovery thereafter was slow. By Thursday, July 6, loadings had reached 14,000 cars but were still running 2,000 cars below the level of the week preceding. Even allowing for full recovery on Friday and Saturday, it does not appear likely that the week's production can pass 3,900,000 tons. Contributing to the decrease in output was a recurrence of traffic congestion on the railroads of Southeastern Kentucky and parts of West Virginia.

The quantity of unbilled coal at the mines has now fallen to small proportions and continues to decline. In the week ended July 1 the average daily number of unconsigned carloads of bituminous coal was 2,898, equivalent to 145,000 tons. This includes all the unbilled coal held by all carriers.

The mine reports for the week ended June 24—the twelfth of the strike—show conditions during the period of highest production since the strike began.

The traffic congestion in Southeastern Kentucky which had been the immediate cause of the decrease in output in the eleventh week, was materially relieved. Losses ascribed to transportation disability in the Harlan field declined from 49.4 per cent of full time to 21.3 per cent, and in the Southern Appalachian field also the placement of cars at the mines was better. This improvement more than offset an increase in transportation disability in the Hazard district and in Northeastern Kentucky. The only other field to report significant loss through transportation was Winding Gulf. The report of transportation disability for Colorado was confined to the Routt County field, the peculiar situation of which has been referred to in these reports. No great change in the number of men on strike is indicated by the mine reports. Production in non-union Pennsylvania continued to increase slowly, but the mines operating had less than their normal working force and shipments were still below those just before the strike.

## Commission and Court News

### Interstate Commerce Commission

The commission has suspended from July 10 until November 7, the operation of schedules published by the Buffalo, Rochester & Pittsburgh, which propose to cancel the specific commodity rates on brick from New York and Pennsylvania points to Norfolk & Western stations and apply class rates in lieu thereof.

A hearing before the Interstate Commerce Commission on its Docket No. 13896, in re rules governing ratings of coal mines, other than anthracite, and the distribution of cars to such mines, consolidated with the commission's Docket No. 12530, in re distribution among coal mines of privately owned cars and cars for railroad fuel, will be held at 9 a. m. on July 17, at Washington, D. C. The committee which will handle this matter on behalf of the American Railway Association is prepared to offer testimony on behalf of all the railroads with respect to both general subjects. Individual railroads are not, however, precluded from offering any testimony through their own witnesses and counsel with respect to the matters under consideration on behalf of their individual lines.

### Express Rates to Be Investigated

The Interstate Commerce Commission has ordered an investigation, upon its own motion, into the interstate rates and charges of express carriers subject to the Interstate Commerce Act for the transportation of express traffic in and between the several zones as defined in *In Re Express Rates, Practices, Accounts, and Revenues*, for the purpose of determining whether such rates and charges, or any of them, are unreasonable or otherwise in contravention of the provisions of the Interstate Commerce Act, and of making such findings and entering such orders as may be necessary to remove any unlawfulness which may be found to exist.

All express companies and common carriers by rail subject to the provisions of the Interstate Commerce Act engaged in the transportation of express traffic between points in the United States and between such points and points in adjacent foreign countries be, and they are made respondents to this proceeding.

### Joint Rates Must Not Be Increased or

### Cancelled Because of Disagreement

The Interstate Commerce Commission in a notice to carriers says it frequently occurs that carriers, unable to agree among themselves upon the division of joint through rates, propose cancellation or increase of such joint rates as a means of adjusting their differences. Almost invariably when no substantial justification for the proposed increase other than dissatisfaction with division is offered, the commission suspends such cancellation or increase and after hearing, requires that the schedules under suspension be cancelled, continuing the joint rates in effect.

"Section 15 of the Interstate Commerce Act places upon the carrier the burden of proof to show that a rate, fare or charge increased after January 1, 1910, is just and reasonable. Disagreement over divisions is not considered by the commission as justification for increases in or cancellation of joint rates or charges, and therefore, as it construes the law, it has no option other than to condemn such changes unless substantial justification other than dissatisfaction with divisions is submitted. The commission is authorized by the same section of the act to prescribe just, reasonable and equitable divisions to be received by the several carriers parties to joint rates and therefore, if unable to obtain equitable divisions from its connections, a carrier should bring the situation to the attention of the commission in an appropriate proceeding rather than without justification attempt to increase or cancel joint rates. Ordinarily the commission will not undertake in investigation and suspension proceedings to pass upon the reasonableness of divisions of joint rates involved therein.

"The attention of carriers is called to the fact that the only

result of attempting to cancel or increase joint rates, which in themselves are reasonable, because of disagreement over divisions, has been waste of time and added expense to shippers, the commission and themselves. Therefore such practice should be discontinued."

### Switching Charges at Boston Reduced

The Interstate Commerce Commission has issued a decision finding unjust and unreasonable the switching charges, rates and practices at Boston, Mass., and vicinity and prescribing enlarged switching limits and a uniform basis of switching charges and absorptions, effective on October 2. The case is that of the Boston Wool Trade Association vs. the director general and the various railroads and has been under consideration by the commission since the period of federal control. Various other shippers and receivers of freight intervened and the case was submitted to the commission finally on May 11, 1921. The decision reviews at length the evidence submitted in the case, including a study of the cost of switching service. The order provides for a rate of \$10 per car for interchange switching, \$15 per car for intra-terminal switching and \$20 per car for inter-terminal switching, as defined in the report. The railroads were also ordered to establish between points outside and points inside the switching limits of Boston a rate that does not exceed the rate or charge contemporaneously maintained and applied on like traffic between the same outside point and any other point within the future switching limits. They are also required to maintain through routes between local points outside the switching limits and points within the limits and to apply to transportation over such through routes rates which shall not exceed the rates applied on like shipments from and to the same points to or from Boston by more than \$5 a car, provided that these provisions shall not apply to the extent that the defendants accomplish similar results by the partial absorption of switching charges. In view of the intricacy of the situation and the somewhat fragmentary character of the evidence, the report says it is not an easy matter to determine just where the limits of the Boston switching district should be placed nor what the switching charges or absorptions should be. For this reason its conclusions with respect to these matters must be regarded as in a measure tentative or experimental. Applications of the shippers for reparation and of the carriers for fourth section relief were denied.

## Court News

### Nonmineral Character of Railroad Grant Lands

The Circuit Court of Appeals, Ninth Circuit, holds that, while the act of 1886 making a grant of lands to the Southern Pacific excluded mineral lands, it was intended that the character of the lands should be determined by the Interior Department before the issue of patents, and after a patent issued under the grant, it must be accepted, in a suit where the attack is collateral, as conclusively showing the nonmineral character of the land and the regularity of the proceedings.—*People's Development Co. v. Southern Pacific*, 277 Fed. 794.

### Decisions Under Federal Employers' Liability Act

The Illinois Supreme Court holds that an employee engaged in interstate commerce work, killed in a collision while going from the yard to his home on a hand-car provided by the railroad and under the direction of a foreman, was within the act.—*Ramsay v. B. & O. (Ill.)*, 133 N. E. 703.

A blacksmith, injured while carrying a drawbar belonging to an engine used in interstate traffic, was held within the act.—*Glidewell v. Quincey, O. & K. C. (Mo. App.)*, 236 S. W. 677.

The Wisconsin Supreme Court holds that an employee sent from one town to another to make repairs on cars being used in interstate commerce, was engaged in interstate commerce when killed, on his way back, by a train engaged purely in interstate commerce.—*Richter v. Chicago, M. & St. P. (Wis.)*, 186 N. W. 616.

The Iowa Supreme Court holds that a switchman of a terminal company moving an empty tank car having its origin out of the state, to the track of the owner, was engaged in interstate commerce precluding recovery under the Workmen's Compensation Act.—*O'Neill v. Sioux City Terminal (Iowa)*, 186 N. W. 633.

## Foreign Railway News

### Reserved Seats in British Coaches

LONDON.

Owing to the increasing popularity of the system of reserving seats on express trains, the Great Western Railway (England) is extending and improving this facility on the principal trains during the summer months, commencing in July. The registration of seats will be based on the system adopted by theatres, plans of the trains being provided at the railway stations concerned, showing intended travellers the exact position of every seat, and its number in the train, smoking compartments being indicated. The registration fee will be one shilling (about 25 cents at the normal rate of exchange). The tickets for first and third class seats will be distinguished by different colors and will show the date on which the passenger will travel and the time of the train. Arrangements are also being made for reserving seats by mail.

### Forty Die in German Railway Accident

LONDON.

A serious railway accident occurred on June 27 on the Berlin Metropolitan Circle Line. The number of dead is 40 and injured 30. The accident is explained by the extraordinary traffic conditions which were created by the stoppage of work as a tribute to Dr. Rathenau, who was murdered, supposedly by monarchist sympathizers. At noon work in all factories and most shops ceased, but at the same time, tramcars and motor omnibuses were withdrawn from the streets and for thousands of people the metropolitan trains were the only means left of getting anywhere near their homes.

The accident occurred between the two stations of Gesundbrunnen and Schonhauser Alle. A coach door on the rear side of one of the trains was left open, swinging outward. It seems that this door caught the projecting ends of a number of planks which a workman standing on the footboard of a car on a passing train was carrying in a bag on his back. Practically all the people who were on the footboards of the rear portions of both trains were brushed off.

### Electrification at Bombay, India

Approximately 40,000,000 rupees (about \$13,000,000) will be spent in the next five years in the electrification of railways around Bombay, according to Commerce Reports. The first of this work will be on the Harbor Branch of the Great Indian Peninsula Railway and bids on this will soon be asked. This line is about seven miles long, half of which is double-tracked. The Tata Hydroelectric Power Company will furnish the power from existing power houses and sub-stations. It is estimated that the electrification of the Harbor Branch will represent about one-thirteenth of the total program.

The second step on the program will be the electrification of the Great Indian Peninsula's double-tracked main line from Victoria terminus to Kurla. Bids for this will be called for in about six months. Other projects are for the electrification of the G. I. P. line from Kurla to Thana, 14 miles, and from Thanan to Kalyan. Kalyan is 34 miles from Bombay. Meantime the Bombay, Baroda & Central India proposes electrifying its double-tracked line from Colaba station to Virar, a distance of approximately 39 miles. It is understood that the government of India will advance the funds necessary for this work.

### The English Engineering Trades Lock-out Settled

LONDON

The great engineering lock-out in Great Britain which has lasted for three months has at last been settled. The result of the ballot which was taken shows that 75,478 members were in favor of a settlement and 39,423 against, leaving a majority of 36,055 in favor of settlement.

From the outset the employers were unanimous in their decision not to give way on any matter of principle. They felt that the time had come when it must be decided once for all whether management of the works was to be in the hands of the owners or in those of



representatives of the employees. That was the real point at issue and a great many employers declared that sooner than give way they would close their businesses. However, although the men have obtained certain concessions, the principle that the management shall be vested in the employer has been maintained, and it only remains for the whole community, which has suffered severely from the effects of the struggle, to deplore the necessity for a fight of this character before a decision that was inevitable could be reached.

The end of this lock-out, however, does not mean that the unemployment in the metal trades will immediately cease. On the contrary there is reason to believe that the proportion of unemployed in the engineering unions will be large for some time to come.

### K. C. M. & O. in Trouble in Mexico Too

It is authoritatively stated in advices from Monterey, Mexico, that unless immediate steps are taken by the Kansas City, Mexico & Orient to rehabilitate and connect up its broken stretches of track in that country the Government may take over the property under forfeiture of the company's concession. No public announcement has been made as to what status the Mexican lines of the Kansas City, Mexico & Orient occupies with regard to the possible abandonment of that part of the system which lies in the United States. It is explained, however, that from a financial standpoint, the Mexican divisions are in as bad shape as those across the Rio Grande. It was recently reported that the Southern Pacific of Mexico was negotiating for the purchase of the Kansas City, Mexico & Orient of Mexico, with the view of connecting up the different links in the system and thus forming a new route from the port of Topolobampo to Alpine, Texas, where connection would be made with the transcontinental line of the Southern Pacific. If this pending deal is not made, the government will probably take over the property and merge it with the National Railways of Mexico.

The route across Mexico as laid out for the Kansas City, Mexico & Orient is 633 miles from the Rio Grande crossing, three miles below Presidio, Texas, to Topolobampo. Of this mileage there is completed three stretches of track, operated as separate divisions, aggregating 227 miles, leaving gaps aggregating 406 miles yet to be built. The first division runs from Marquez, State of Chihuahua, to the city of Chihuahua, 91 miles. The second division runs from Minaca to Sanchez, 74 miles, and the third division from Fuerte to Topolobampo, 62 miles. The latter crosses the main line of the Southern Pacific of Mexico at San Blas.

The distance from Alpine to the proposed Rio Grande crossing is 83 miles, and from there to Marquez, 165 miles. For several years preceding the revolutionary period the Kansas City, Mexico & Orient operated its trains west from Chihuahua over the track of the Mexico & Northwestern to Minaca, thence over its own track to Sanchez. From Chihuahua to Minaca is 122 miles. The unfinished gap between Sanchez and Fuerte is 209 miles, and this part of the route is said to be through a mountainous region that offers great engineering and construction difficulties to the building of the proposed railroad.

It is pointed out that the rounding out of the Kansas City, Mexico & Orient in Mexico as originally planned would give an enormous scope of rich territory of this country a transportation outlet to the United States. The Conchos river valley in the State of Chihuahua, which the line already penetrates, is capable of being irrigated and made very productive, while the western part of that state has mineral resources almost unequalled anywhere in the world, it is asserted. The Pacific Coast region is being rapidly developed agriculturally and much of its products are finding a market in the Western part of the United States.

In the event of the National Railways of Mexico taking over the Kansas City, Mexico & Orient's division in that country, it is considered doubtful if the connecting up of the different stretches of track would be made for many years to come. It is the expressed opinion of men who are familiar with the situation that in their present positions of isolation these component parts of the Kansas City, Mexico & Orient cannot be made to pay profitable returns, but that by finishing the line all the way through from Alpine, Texas, to Topolobampo, it would obtain a heavy freight traffic.

## Equipment and Supplies

### Locomotives

THE SEWELL VALLEY has ordered one Mikado type locomotive from the Baldwin Locomotive Works.

THE NEW YORK CENTRAL is having 50 locomotives overhauled at the shops of the Baldwin Locomotive Works.

THE ILLINOIS CENTRAL is inquiring for 15, 0-8-0 type switching locomotives, 25 Santa Fe type locomotives and 25 Mikado.

THE INTERNATIONAL HARVESTER COMPANY has ordered two 6-wheel switching locomotives from the Baldwin Locomotive Works.

THE WESTERN MEAT COMPANY, San Francisco, Cal., has ordered one 6-wheel switching locomotive from the American Locomotive Company.

THE ERIE has entered into a contract for the repair of 20 locomotives a month for a period of six months at the American Locomotive Company's Cooke Works.

THE BALTIMORE & OHIO has ordered 35 Mikado type locomotives from the Baldwin Locomotive Works. This road is also having repairs made to 25 locomotives at the Baldwin shops.

THE DELAWARE, LACKAWANNA & WESTERN, reported in the *Railway Age* of July 1 as contemplating asking for bids on about 30 locomotives, is now asking for 5 Pacific type and 25 Mikado type locomotives.

THE PITTSBURG PLATE GLASS COMPANY, Zanesville, Ohio, has ordered one, 0-4-0 type switching locomotive from the American Locomotive Company. This locomotive will have 13 by 20 in. cylinders and a total weight in working order of 65,000 lb.

THE CENTRAL AMERICA OF CUBA has ordered one Mogul type locomotive from the American Locomotive Company. This locomotive will have 17 by 24 in. cylinders and a total weight in working order of 111,000 lb.

THE DELAWARE & HUDSON has ordered one Consolidation type locomotive from the American Locomotive Company. This locomotive will have 23½ and 41 by 30 in. cylinders and a total weight in working order of 312,000 lb. and will be equipped with superheater.

### Freight Cars

THE SOUTHERN PACIFIC is inquiring for 250 general service cars.

THE PERE MARQUETTE is considering having repairs made to 1,000 box cars.

THE BUFFALO CREEK & GAULEY is inquiring for from 200 to 300 hopper cars.

THE BURDETT MANUFACTURING COMPANY, Chicago, is inquiring for one U. S. R. A. box car.

THE HUMBLE OIL & REFINING COMPANY is inquiring for three 12-yd. capacity air dump cars.

THE ARGENTINA STATE RAILWAYS have placed an order with the Standard Steel Car Company for 100 ballast cars.

THE PITTSBURGH & WEST VIRGINIA and the West Side Belt are inquiring for 1,000 hopper cars.

THE NORTHERN REFRIGERATOR CAR COMPANY has ordered 500 refrigerator cars from the Pullman Company.

THE CHICAGO & NORTH WESTERN is preparing to issue inquiries for repairs to a large number of cars, the number and type yet to be determined.

THE CHICAGO, MILWAUKEE & ST. PAUL is inquiring for repairs on from 1,000 to 1,500 box cars and 250 gondola cars.

THE CHICAGO, BURLINGTON & QUINCY is preparing to issue inquiries for repairs to a large number of cars the number and type yet to be determined.

THE SAN ANTONIO UVALDE & GULF is inquiring for 25, 30-ton steel underframe ventilated box cars and 25, 30-ton steel underframe composite gondola cars.

THE CHICAGO, ROCK ISLAND & PACIFIC is inquiring for repairs to 1,500 box cars, from 500 to 1,500 gondola cars, 500 refrigerator cars and 500 furniture and automobile cars.

THE CENTRAL VERMONT will have repairs made to 200 steel gondola cars, 100 wooden underframe box cars and 400 steel underframe box cars at the shops of the American Car & Foundry Company.

THE ILLINOIS CENTRAL, reported in the *Railway Age* of July 8 as inquiring for from 500 to 1,000 gondola cars, is now inquiring for 2,000 gondola cars and is asking prices on the repair of 600 gondola cars.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS has increased its recent freight car inquiry from 750 to 1,000, the revised inquiry calling for 750 box cars, 150 stock cars of 40 tons' capacity and 100 flat cars of 50 tons' capacity.

THE DELAWARE, LACKAWANNA & WESTERN reported in the *Railway Age* of July 1 as inquiring for 380 gondola car bodies of 40 tons' capacity, has given an order for 370 car bodies to the American Car & Foundry Company.

THE NEW YORK, NEW HAVEN & HARTFORD has given a contract to the Keith Car & Manufacturing Company, Sagamore, Mass., for rebuilding 6,000 bad-order freight cars. The company also has a large number of additional cars awaiting repairs.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS, reported in the *Railway Age* of June 10 as inquiring for 500 box cars, 150 stock cars and 100 flat cars, has ordered 500, 40-ton single sheathed box cars, 250, 40-ton double sheathed box, 150, 40-ton stock and 100, 50-ton flat cars from the American Car & Foundry Co.

THE TEXAS & PACIFIC will build 532 freight cars in its shops at Marshall, Tex., as soon as the shopmen's strike is settled. This is the first authorization of a total 1,100 cars which are to be built in these shops, the company already having the necessary material on hand for the construction of the initial lot.

### Passenger Cars

THE TENNESSEE CENTRAL is inquiring for from 2 to 5 coaches.

THE NEW YORK CENTRAL is having seven dining cars built at its West Albany shops.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS is reported to be considering the purchase of 17 passenger cars.

### Machinery and Tools

THE LONG ISLAND has ordered a 150-ton overhead traveling crane from the Whiting Corporation for its Morris Park shops. The company is inquiring also for the following tools: Vertical boring mill, car wheel borer, car axle lathe, vertical double slotter, upright bushing press and a wheel press.

### Signaling

PENNSYLVANIA.—See item in General News Department.

THE GRAND TRUNK has placed an order with the General Railway Signal Company for 12 color light signals complete, 36 type K  $\frac{1}{2}$  transformers, 26 Model Five switch boxes and 10 light type switch indicators for installation between St. Henry, Que., and Lachine.

THE VICTORIAN RAILWAYS, Australia, have placed an order with the General Railway Signal Company for two Model 2 B unit lever electro-mechanical interlocking machines for installation at Camberwell, Victoria, and Hawthorn. Both machines will have 32 levers.

## Supply Trade News

The offices of the **Air Reduction Sales Company**, formerly maintained at 120 Broadway and 160 Fifth avenue, New York, have been consolidated with the executive office at 342 Madison avenue.

The **Clarence Cottman Company**, which operates one of the large piers at Canton Terminal, Baltimore, Md., has given a contract to Heyl & Patterson, Inc., Pittsburgh, Pa., for an 11-ton man trolley ore bridge.

**W. J. Gruss**, who has been head of the pig iron sales department of Pickands, Mather & Company, Cleveland, Ohio, has resigned to become manager of sales of the **Gartland-Haswell-Rentschler** interests, with headquarters at Dayton, Ohio.

The **Greenville Steel Car Company**, Greenville, Pa., is erecting a new building 75 ft. by 390 ft. in which the company plans to install its present fabricating equipment. The company has heretofore only repaired and rebuilt steel equipment but will in the future also build new freight cars.

**Jay L. Hench**, who resigned recently as Chicago district sales manager of the Lackawanna Steel Company, has formed **Jay L. Hench & Company**, 208 South La Salle street, Chicago,



J. L. Hench

to engage in the purchase and sale of various iron and steel products including steel sheet piling, light and heavy tee rails, sheets, plates, shapes and bars with an additional line of open-hearth electric castings. Mr. Hench was born on April 11, 1885, at Hinsdale, Ill. He attended Cornell University from 1903 to 1905, specializing in iron and steel analysis. From 1905 to 1906 he was employed in the open-hearth and Bessemer departments of the Illinois Steel Company, and from 1906 until 1911 he was connected

with the sales department of Joseph T. Ryerson & Son. He left in 1911 to become a sales agent of the Lackawanna Steel Company, having jurisdiction over the Indiana and Michigan territory. In May, 1919, he was promoted to district sales manager in charge of the Chicago office, which position he held up to the time of his resignation.

The **Pilliod Company**, Swanton, Ohio, manufacturers of the Baker locomotive valve gear, with New York office at 30 Church street, has secured control of the Southern Valve Gear Company. The former offices of the Southern Valve Gear Company located at Knoxville, Tenn., have been discontinued.

**H. D. Shute**, vice-president and general sales manager of the Westinghouse Electric & Manufacturing Company, Pittsburgh, Pa., has been elected a member of the board of directors of the **Standard Underground Cable Company**, Pittsburgh. **A. B. Saurman**, general sales manager of the **Standard Underground Cable Company**, Pittsburgh, has been elected vice-president in addition to his other duties.

**C. E. Knickerbocker**, regional engineer, Eastern Region, United States Railroad Administration and formerly chief engineer of the New York, Ontario & Western, resigned effective July 1 and has formed a partnership with L. D. Rockwell, under the name of **Knickerbocker & Rockwell**,



with office at 2 Rector street, New York City. The new firm will handle railway supplies and specialties.

**The Younglove Construction Company**, United Bank building, Sioux City, Iowa, have been appointed representatives of the **Conveyors Corporation of America**, 326 West Madison street, Chicago, for the sale of American trolley carriers in northwestern Iowa and in South Dakota. The trolley carrier is equipment used for handling coal from cars to storage pile or overhead silos by means of monorail and self dumping buckets.

**Sidney G. Johnson** on July 1 resigned as assistant to the president of the Chicago Railway Signal & Supply Company. In the *Railway Age* of June 24, on page 1754, Mr. Johnson was by error mentioned as being connected with the Okonite Company instead of the Hazard Manufacturing Company, Wilkes-Barre, Pa., with which he has been connected since April, 1921. Mr. Johnson's headquarters are at 30 Church street, New York City.

**Joseph H. Towle**, who joined the selling forces of the **National Railway Appliance Company** of New York, some time ago, is now in charge of the company's new Pennsylvania headquarters at Harrisburg, Pa., where an office was recently opened at 85 Union Trust Building. Mr. Towle was formerly with the Railway Improvement Company, New York, as sales engineer. The National Railway Appliance Company is now selling a new product known as Tnemec paint. The principal use of this material is the protection and rust-proofing of metals and other materials.

## Obituary

**Harvey E. Miller**, vice-president of the Fairbanks Company, New York City, died on July 9 of injuries he received in the Atchison, Topeka & Santa Fe collision at Burrton, Kan.

## Trade Publications

**CERTIFIED MALLEABLE IRON.**—The daily service that is being rendered by one of the most important branches of the iron and steel business is outlined in a book, entitled "Certified Malleable in Transportation and Industry," just issued by the American Malleable Castings Association, Cleveland, Ohio. It tells in an interesting way the story of certified malleable castings and their contribution to safety, strength and economy.

The book points out the great responsibility that malleable castings assume when used for vital parts of railway and general industrial equipment and also describes the methods employed by the American Malleable Castings Association in bringing the product of its members to a uniformly high standard and maintaining it at that point. By standardizing the manufacturing process of an industry, scientists and practical foundrymen, operating through the American Malleable Castings Association, have produced certified malleable, a superior metal assuring high strength and ductility.

In the strict supervision of the product of its members, the work of the Association parallels the activities of the trade guilds of the middle ages whose chief reason for existence was the guardianship of the consumers' interests. They saw to it that their members conformed to adopted standards of material and craftsmanship, and their supervision was accepted by the careful buyer as a certain guaranty of quality. The book is a complete treatise on the subject of malleable iron and gives information regarding the properties of the metal that are of interest and value to all users.

"TAKE A CHANCE ON READING THIS, but never on a railroad crossing." This is the introduction to a circular addressed to "Our Friends the Automobilists," which has been issued by W. H. Gemmell, president of the Minnesota & International, for distribution in garages, hotels, commercial clubs and other places where it will be seen by the people addressed. "One hundred per cent of the terrible and distressing crossing accidents that happen," says the circular, "are caused by the drivers of cars and teams failing to exercise the ordinary care that is expected of prudent men and women in the interests of themselves and their families. Does this seem like a strong statement? Think it over. How can it be otherwise? \* \* \*

## Railway Construction

**ATLANTIC COAST LINE.**—This company's shops at Montgomery, Ala., were recently destroyed by fire, but as yet no definite plans for rebuilding them have been made.

**BALTIMORE & OHIO.**—This company has placed contract with the Pittsburgh Construction Company, Pittsburgh, Penna., for the erection, concreting and waterproofing of a new railroad bridge crossing Spring Grove avenue, Cumminsville, Cincinnati, O. The new structure at this point is to be a solid floor bridge, consisting of four through plate girder spans, two 43 ft. in length and two 30 ft. in length. The work has been undertaken for the purpose of replacing an old and light bridge, and constitutes a step in the modernization of the company's facilities in the Cincinnati district.

**BALTIMORE & OHIO.**—Contracts for bridgework recently placed by this company include the following: Bridge over Grand Calumet river, Gary, Ind.—Two plate girder spans, 78 ft. and 25 ft. in length, respectively, required for extension of opening provided by 14-ft. masonry arch. Contract for the fabrication of the steelwork has been placed with the American Bridge Co.; delivery is to be made September 1, and erection will be performed before the conclusion of the present working season. The installation of these spans has been found necessary, due to the increased volume of water in the Grand Calumet river, occasioned by drainage from the adjacent plant of the Illinois Steel Co. Similar work on the adjacent bridges of the New York Central and the Elgin, Joliet & Eastern is also involved, and is being prosecuted simultaneously: bridge crossing public road, south of Painsville, O.—The new structure at this point, consisting of two plate girder spans, with respective lengths of 63 ft. 6 in. and 33 ft., was fabricated by the American Bridge Co. Contracts for the erection has been let to the Kelly-Atkinson Construction Co., Chicago, Ill. The new bridge replaces an old masonry arch viaduct, constructed almost 70 years ago, which had been found inadequate for the company's needs and which provides a restricted opening for the passage of highway traffic: bridge crossing, Black river, Elyria, O.—This structure consists of two deck plate girder spans, each 47 ft. long, and two "I" beam spans, each about 20 ft. in length. The superstructure was fabricated by the American Bridge Co. Contract for the erection has been placed with the Kelly-Atkinson Construction Co.; overhead bridge west of Metcalf, Ind.—This structure, which crosses the company's tracks on the line of the Lincoln highway, is to consist of three spans of plate girders, encased in concrete, center span 63 ft. long, two approach spans each 32 ft. long. The new bridge replaces a wooden structure, and the work is occasioned by the absorption of a county road into the Lincoln highway, increased volume of highway traffic and weight of vehicles. Contract for the construction of the new bridge complete has been placed with the American Bridge Co., and the work will be pushed to a prompt conclusion.

**CANADIAN NATIONAL.**—This company has awarded a contract for grading and culverts on a revision of the Grand Trunk Pacific main line, at the crossing of Sundance creek between Mile 60.71 and Mile 64.46, to David Fitzgerald, Carstairs, Alta.; also for grading and culverts on a proposed five-mile connection between the Canadian Northern Alberta and the Grand Trunk Pacific, near Magnolia, Alta., to James Fitzgerald, Edmonton, Alta.; also for grading and culverts on a proposed connection at Camrose between the Bashaw division of the Grand Trunk Pacific and the Battle River subdivision of the Canadian National, to Fred Mannix, Calgary, Alta.; also for the construction of a pipe line approximately 16,200 ft. long at Kindersley, Sask., to C. U. McManus, Moose Jaw, Sask.

**CANADIAN PACIFIC.**—This company is calling for bids, up to 3 p. m. Monday, July 17, for the construction of a new pier between piers A and D at its Pacific terminals in Vancouver harbor. The pier will be 850 ft. long and 330 ft. wide, and is estimated to cost \$2,000,000. It is to be completed by September 30, 1923. H. Rindal, district engineer, Vancouver, B. C., is in charge.

**CHICAGO, BURLINGTON & QUINCY.**—This company has completed surveys for and may undertake next year the construction

of a 17-mile cut-off authorized between Frederick, Ill., and Vermont, the work to involve heavy grade revision and probably to include four tunnels. This company is making surveys in contemplation of building a 45-mile extension northerly from Casper, Wyo., to the Salt Creek and Teapot oil fields.

**CHICAGO, BURLINGTON & QUINCY.**—This company has awarded a contract to the Great Lakes Construction Company, Chicago, for the construction of a power plant at Aurora, Ill. This company, reported in the *Railway Age* of July 1, page 45, as requesting bids for the construction of a new round house at Rock Island, Ill., has awarded the contract for this work to G. A. Johnson & Sons, Chicago. The company will also accept bids for the construction of one-story brick passenger stations at Fort Morgan, Colo., and Hardin, Mont., respectively.

**CHICAGO & NORTH WESTERN.**—This company will accept bids until July 16 for the construction of a one-story frame passenger station at Bassett, Neb.

**CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.**—This company has been ordered by the Illinois Commerce Commission to construct a viaduct over its tracks and the track of the Lake Erie & Western at Bloomington, Ill.

**EVANSVILLE, INDIANAPOLIS & TERRE HAUTE.**—This company reported in the *Railway Age* of May 20, page 1197, as preparing to replace four steel bridges at various points on its line, has awarded the contract to the Walsh Construction Company, Davenport, Iowa, for the sub-structure work on three bridges, the fourth not requiring such work.

**GREAT NORTHERN.**—This company has been ordered by the Board of Railway Commissioners of Montana to extend its line from a point in or near Gilman to Augusta before September 15.

**ILLINOIS CENTRAL.**—This company is contemplating the improvement of its freight facilities at Indianapolis, Ind., the work to include the construction of a freight handling platform, the paving of the drive way and the laying of two tracks.

**LOS ANGELES & SALT LAKE.**—The Interstate Commerce Commission has issued a certificate authorizing the construction of a branch line from Delta to Fillmore, Utah, 31.4 miles, together with 3.6 miles of secondary track. The cost of the proposed line is estimated at \$701,188.

**MISSOURI, KANSAS & TEXAS.**—This company has awarded a contract to Bowie, Lydon & Co., Inc., Chicago, for the construction of a freight terminal at Denison, Texas, to cost approximately \$450,000.

**MISSOURI, KANSAS & TEXAS.**—This company is reported to have awarded a contract to the A. McKenzie Company for the construction of a two story brick and concrete freight house, 58 ft. by 400 ft. at Waco, Texas. It is also accepting bids for the construction of freight houses at Wichita Falls, Texas, and Fort Worth, respectively.

**NEW YORK CENTRAL.**—This company is receiving bids until July 25 for covering a new metal superstructure for its bridge over Sherman street, Fort Wayne, Ind.

**PENNSYLVANIA.**—This company is receiving bids for the elevation of tracks from Everett street to south of White Horse Pike, Camden, N. J. Approximate quantities are as follows:—45,000 cu. yd. embankment; 590 cu. yd. concrete abutment masonry and concrete bridge floor, including reinforcement; 6,500 sq. ft. waterproofing; 2.4 miles track material unloaded, piled, distributed and laid; 4 turnouts and 1 crossover, etc. This company is also receiving bids for paving and track work along Front street, Chester, Pa., from Ridley river to Pennell street. Approximate quantities are as follows: 3,000 cu. yd. excavation; 0.76 mile track material unloaded, piled, distributed and laid; 2,000 cu. yd. unloading and surfacing stone ballast; 5 turnouts and 2 cross overs laid; 2,900 cu. yd. street grading; 3,750 lin. ft. concrete curb; 5,400 sq. yd. Belgian block paving on concrete base. The work will be in charge of C. W. Thorn, assistant engineer, Philadelphia, Pa.

**UNION PACIFIC.**—This company will accept bids until July 21 for the construction of a brick freight house at Denver, Colo. Its superstructure will be of steel, 610 ft. by 70 ft., including two platforms, 16 ft. by 865 ft. and an automobile unloading shed, 50 ft. by 400 ft.

## Railway Financial News

**ATLANTIC COAST LINE.**—*Authorized to Acquire Control.*—The Interstate Commerce Commission has authorized the acquisition by this company of control of the Rockingham Railroad by purchase of additional shares of its stock. The Rockingham Railroad operates 21 miles between Gibson, N. C., and Rockingham.

**BIRMINGHAM & NORTHWESTERN.**—*Purchased.*—This road has been purchased by the Gulf, Mobile & Northern, subject to the approval of the Interstate Commerce Commission. The Birmingham & Northwestern operates between Jackson, Tenn., and Dyersburg, 49 miles.

**CHESAPEAKE & OHIO.**—*Asks Authority to Acquire Trackage Rights.*—This company and the Norfolk & Western have applied to the Interstate Commerce Commission for approval of the acquisition by the Chesapeake & Ohio of trackage rights to operate over the line of the Norfolk & Western between Waverley and Valley Crossing, Ohio.

**CHICAGO & NORTH WESTERN.**—*Equipment Trust Authorized.*—The Interstate Commerce Commission has authorized this company to assume obligation and liability in respect of \$5,250,000 of 5½ per cent certificates to be issued by the Farmers Loan & Trust Company at not less than 97½.

**CHICAGO, MILWAUKEE & ST. PAUL.**—*Equipment Trust Certificates Authorized.*—The Interstate Commerce Commission has authorized this company to assume liability in respect of \$8,085,000 of equipment trust certificates to be sold at not less than 96¾.

**CINCINNATI NORTHERN.**—*Annual Report.*—The income account for the year ended December 31, 1921, follows:

	1921	1920
Miles operated .....	245	246
Operating revenues .....	\$3,757,713	.....
Operating expenses .....	2,642,291	.....
Net from railway operations .....	1,115,422	.....
Railway tax accruals .....	274,948	.....
Railway operating income .....	840,448	.....
Net railway operating income .....	702,255	\$475,243†
Total other income .....	8,224*	1,638
Gross income .....	694,031	476,882
Total deductions from gross income .....	131,543	121,665
Net income .....	562,488	355,217
Dividends declared (5 per cent in 1921; 3 per cent in 1920 charged to profit and loss) .....	150,000	.....
Surplus for year .....	412,488	355,217

†Includes compensation accrued for January and February, guaranty, March to August, and net railway operating income—corporate—September to December.

\*Debit balance.

**CUBA RAILROAD.**—*Dividends.*—This company has declared two semi-annual dividends of \$3 a share on the preferred stock, payable August 15, 1922, and February 15, 1923. Both disbursements are payable to stock of record July 20, 1922. The last previous payment was a \$3 semi-annual disbursement on August 1, 1920.

**DENVER & RIO GRANDE WESTERN.**—*Receivership Is Asked.*—Receivership for this road has been requested by the New York Trust Company in an application filed July 7 in the Federal District Court of Denver, Colo. The petitioner alleges that there have been several defaults on the mortgage bonds which were first issued by the Denver & Rio Grande and later purchased by the succeeding company, the Denver & Rio Grande Western. Judge Foster Symes has set the hearing on the application for July 21.

**ELGIN, JOLIET & EASTERN.**—*Annual Report.*—The income account for the year ended December 31, 1921, follows:

	1921	1920
Miles operated .....	457	457
Operating revenues .....	\$19,334,942	\$22,051,470
Operating expenses .....	13,613,040	16,249,936
Net from railway operations .....	5,721,902	5,801,534
Railway tax accruals .....	933,167	644,294
Railway operating income .....	4,788,736	5,157,241
Net railway operating income .....	3,370,349	3,106,832
Other income .....	1,470,297	220,033
Gross income .....	4,840,646	3,326,864
Rent of leased roads .....	3,008,088	1,358,981
Interest on funded debt (E. J. & E. Ry. Co.) .....	500,000	500,000
Total deductions from gross income .....	3,579,869	2,238,548
Net income .....	1,260,777	1,088,316



**HOCKING VALLEY.—To Exchange Bonds.**—The Guaranty Trust Company of New York announces that on and after July 10 the Hocking Valley Railway Company 6 per cent equipment gold notes, series 32 and 32A, in definitive form, with coupons due July 15, 1922, and subsequent attached, will be delivered in exchange for trust receipts now outstanding upon presentation of the latter at its trust department, 140 Broadway, New York City.

**ILLINOIS CENTRAL.—Authorized to Operate Line.**—The Interstate Commerce Commission has issued a certificate authorizing this company to operate in interstate commerce a line heretofore built and operated as an industrial spur track, from a point near Zeigler, Ill., for a distance of 4.83 miles and also to operate under trackage rights in connection with it 3,600 feet of track owned by a coal company.

**LAKE ERIE & WESTERN.—Annual Report.**—The income account for the year ended December 31, 1921, follows:

	1921	1920
Miles operated .....	719	738
Operating revenues .....	\$9,061,494	.....
Operating expenses 66 .....	8,137,734	.....
Net from railway operations .....	923,761	.....
Railway tax accruals .....	596,235	.....
Railway operating income .....	327,526	.....
Net railway operating income .....	197,252	\$1,075,123*
Total other income .....	112,902	208,787
Gross income .....	310,154	1,283,910
Interest on funded debt .....	702,741	672,041
Total deductions from gross income .....	898,458	894,181
Balance for year .....	Def. 588,304	389,729

\*Includes compensation accrued for January and February, guaranty, March to August and net railway operating income—corporate—September to December.

**Applications Before I. C. C.**—See New York, Chicago & St. Louis.

**MEMPHIS, DALLAS & GULF.—Sale Again Postponed.**—The sale of this road was again postponed on June 21, this being the third postponement.

**MINARETS & WESTERN.—Asks Authority to Issue Securities.**—This company has applied to the Railroad Commission of California for authority to issue \$50,000 common stock and to sell \$2,200,000 six per cent bonds at not less than 97. The road is being built primarily for the lumbering operations of Sugar Pine Lumber Company which recently established its mills in Fresno. The proceeds of the securities now asked to be issued are to reimburse the lumber company for advances and to provide funds for the completion of the road.

**MISSOURI, KANSAS & TEXAS.—Charter.**—The reorganized company filed incorporation papers in Missouri on July 6 with Secretary of State Charles U. Becker and was given a charter upon payment of an incorporation fee of \$175,025.

**MISSOURI PACIFIC.—Annual Report.**—This company's annual report for 1921 is reviewed in an article on another page of this issue entitled "Operating Characteristics of Missouri Pacific." See also excerpts from annual report on adjacent pages.

**NEW YORK CENTRAL.—Bonds Sold.**—J. P. Morgan & Co. and associates have sold \$25,000,000 refunding and improvement mortgage 5 per cent bonds, series C, at 94½ to yield approximately 5.30 per cent.

The bonds, which have been authorized by the Interstate Commerce Commission, are dated October 1, 1921, and are due October 1, 1933. They are redeemable as a whole, but not in part, at 105 and accrued interest on, but not before, October 1, 1931, or any interest date thereafter, on three months' notice. The proceeds of the issue will be applied to the retirement of the \$25,000,000 of 7 per cent collateral trust bonds of the company, which will be called for redemption on September 1, 1922, and these bonds, due September 1, 1930, will be accepted in payment at 105.

In a letter to the bankers, A. H. Smith, president of the New York Central, said that the company's net railway operating income for the first five months of 1922 was \$20,190,353, compared with \$11,775,742 for the corresponding period of last year, an increase of 60 per cent. He said also that the average interest rate on the entire corporate indebtedness of the New York Central, including the present issue and \$480,161,000 of underlying bonds, is approximately 4 per cent.

**Equipment Trust Authorized.**—The Interstate Commerce Commission has authorized the New York Central Lines to assume obligation and liability in respect to \$27,645,000 of equipment trust certificates to be issued by the Guaranty Trust Company and to be sold at not less than 95.495.

**NEW YORK CENTRAL.—Acquisition of Further Control Authorized.**—The Interstate Commerce Commission has authorized the acquisition of further control of the Cleveland, Cincinnati, Chicago & St. Louis by the New York Central by the purchase of additional stock. The New York Central now controls the Big Four through the ownership of \$30,207,700 of its common stock out of a total of \$47,028,700. This does not, however, constitute complete control since the consent of a majority of the preferred stock is required for the issuance by the Big Four of any evidence of funded debt or the making by it of any lease of railway property which may entail increased fixed charges. The New York Central, therefore, desires to acquire at least a majority of the preferred stock. A group of the owners of preferred stock objected to the plan, contending that the proposed price is inadequate.

**NEW YORK, CHICAGO & ST. LOUIS.—Asks Authority to Acquire Control.**—This company and the Lake Erie & Western have filed a joint application with the Interstate Commerce Commission for an order approving an agreement made between the two roads effective July 1 providing for the operation, management and control of the Lake Erie & Western by the New York, Chicago & St. Louis as a single system. The application is filed under Paragraphs 1 and 2 of Section 5 of the Interstate Commerce Act, but it asks that the commission consider that it is also filed under other parts of the act if the commission considers necessary, and if the commission cannot give its complete approval of the agreement it is asked to state the extent to which it will give approval.

**Contract for Exchange of Materials.**—See article on another page entitled "Contract for Exchange of Materials Held Not to Constitute Control."

**NEW YORK, NEW HAVEN & HARTFORD.—Authorized to Issue Bonds.**—The Interstate Commerce Commission has authorized an issue of \$5,900,000 of first and refunding mortgage bonds to be pledged with the Secretary of the Treasury as part security for a loan from the United States.

**ROCKINGHAM RAILROAD.—Acquisition of Control.**—See Atlantic Coast Line.

**SILVERTON.—Authorized to Abandon Line.**—The Interstate Commerce Commission has authorized the abandonment as to interstate and foreign commerce of this company's narrow gauge railroad from Silverton to Joker Tunnel, Colo., 15.5 miles.

**SOUTHERN PACIFIC.—Asks Authority to Acquire Line.**—This company has applied to the Interstate Commerce Commission for authority to acquire the Chowchilla Pacific, 10 miles, in Madera County, Calif.

**WESTERN MARYLAND.—Annual Report.**—This company's annual report for 1921 is reviewed in an article on another page of this issue entitled "Western Maryland Increases Net with Less Traffic."

### Railroad Administration Settlements

The United States Railroad Administration reports the following final settlements, and has paid out to or received from the several roads the following amounts:

San Antonio & Aransas Pass .....	\$1,000,000.00
Gulf & Ship Island .....	575,000.00
Vicksburg, Shreveport & Pacific .....	250,000.00
Chicago, Peoria & St. Louis .....	1.00
Calumet Western paid Director-General .....	7,377.87

### Dividends Declared

Central of Georgia.—Common, 2½ per cent; preferred, 3 per cent; both payable June 30.  
Nashville, Chattanooga & St. Louis.—3½ per cent, semi-annually, payable August 1 to holders of record July 22.

### Trend of Railway Stock and Bonds Prices

	July 11	Last Week	Last Year
Average price of 20 representative railway stocks .....	67.25	65.41	55.31
Average price of 20 representative railway bonds .....	87.02	86.41	73.96

# Annual Report

## Fifth Annual Report of Missouri Pacific Railroad Company

TO THE STOCKHOLDERS: St. Louis, Mo., April 15, 1922.  
The Board of Directors herewith submits report of the operations and affairs of the Company as of December 31, 1921.

### CORPORATE INCOME STATEMENT

FOR THE YEAR ENDED DECEMBER 31, 1921, COMPARED WITH THE PREVIOUS YEAR

	1921	1920	INCREASE OR DECREASE
Railway operating revenues	\$109,785,949.76	\$98,194,270.81	\$11,591,678.95
Railway operating expenses	91,693,855.71	94,909,598.69	-3,215,742.98
Net revenue railway operations	\$18,092,094.05	\$3,284,672.12	\$14,807,421.93
Railway taxes and uncollectible railway revenue	\$4,396,528.73	\$3,820,708.53	\$575,820.20
Railway operating income	\$13,695,565.32	\$536,036.41	\$14,231,601.73
Other operating income	799,173.59	660,230.05	138,943.54
Total operating income	\$14,494,738.91	\$124,193.64	\$14,370,545.27
Deductions from Operating income	4,257,890.60	4,741,202.29	-483,311.69
Net railway operating income	\$10,236,848.31	\$4,617,008.65	\$14,853,856.96
Non-operating income	3,061,557.37	1,274,901.50	1,786,655.87
Compensation accrued under Federal Control, (Standard Return)		1,872,101.47	-1,872,101.47

Government guaranty under Transportation Act of 1920	1,972,080.96	15,638,828.92	-13,666,747.96
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Gross income	\$15,270,486.64	\$14,168,823.24	\$1,101,663.40
Deductions from gross income	11,733,470.55	11,135,748.07	597,722.48

Balance—Net income transferred to profit and loss	\$3,537,016.09	\$3,033,075.17	\$503,940.92
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### FEDERAL CONTROL

The Board of Directors at a meeting held on July 15, 1921, approved the settlement negotiated with the Director General of Railroads, covering the use of the properties of the Company during the Federal Control Period, January 1, 1918 to February 29, 1920.

Under the terms of settlement the Company received \$13,927,787.35 consisting of a cash payment of \$9,000,000.00 and the cancellation of all open accounts, the balance \$4,927,787.35 was in favor of the Director General.

The settlement was an arbitrary one and no detailed information is available as to the allowances made by the Director General for Additional Compensation, Depreciation, Under-Maintenance and other items included in the claims presented by the Company.

The total amount credited by the Government was \$43,959,387.35, of which \$30,031,600.00 constituted Compensation for use of the property and the balance \$13,927,787.35, the cash payment and cancellation of open accounts and all claims. The latter amount has been credited to Profit and Loss in compliance with Order of the Interstate Commerce Commission dated January 25, 1922.

### GENERAL BALANCE SHEET

ASSETS.	December 31, 1921	December 31, 1920	Increase or Decrease	LIABILITIES.	December 31, 1921	December 31, 1920	Increase or Decrease
<b>INVESTMENTS:</b>				<b>STOCK:</b>			
Investment in Road and Equipment	\$376,558,051.91	\$367,672,892.18	\$8,885,159.73	Capital Stock:			
Improvement on Leased Railway Property	1,078.88	924.95	153.93	Common	\$82,839,500.00	\$82,839,500.00	
Sinking Funds	1,294.72	16,456.32	-15,161.60	Preferred	71,800,100.00	71,800,100.00	
Deposits in Lieu of Mortgaged Property Sold	88,689.09	92,892.92	-4,203.83	TOTAL	\$154,639,600.00	\$154,639,600.00	
Miscellaneous Physical Property	2,385,255.25	2,319,733.53	65,521.72	<b>LONG TERM DEBT:</b>			
Investments in Affiliated Companies—Pledged	6,004,125.65	6,984,125.65	-980,000.00	Funded Debt Unmatured	\$243,447,980.00	\$243,752,880.00	-\$304,900.00
Investments in Affiliated Companies—Unpledged	6,037,104.89	4,932,725.83	1,104,379.06	TOTAL CAPITAL LIABILITIES	\$398,087,580.00	\$398,392,480.00	-\$304,900.00
Investments in Securities Issued or Assumed or otherwise carried as a Liability by the Accounting Company—Pledged	4,165,065.10	5,816,000.00	-1,650,934.90	<b>CURRENT LIABILITIES:</b>			
Investment in Securities Issued, Assumed or otherwise carried as a Liability by the Accounting Company—Unpledged	1,976,585.65		1,976,585.65	Loans and Bills Payable	\$70,000.00	\$3,971,225.00	-\$3,901,225.00
Other Investments—Pledged	15,355,549.87	15,375,448.31	-19,898.44	Traffic and Car Service			
Other Investments—Unpledged	18,259,947.78	8,195,373.48	10,064,574.30	Balances Payable	1,388,000.29	1,920,161.21	-532,160.92
TOTAL	\$430,832,748.79	\$411,406,573.17	\$19,426,175.62	Audited Accounts and Wages Payable	8,071,378.78	13,259,924.65	-5,188,545.87
<b>CURRENT ASSETS:</b>				Miscellaneous Accounts Payable	719,448.94	982,663.55	-263,214.61
Cash	\$1,941,990.59	\$4,527,655.33	-2,585,664.74	Interest Matured Unpaid	1,071,270.80	1,073,967.67	-2,696.87
Special Deposits	935,274.73	4,100,972.32	-3,165,697.59	Unmatured Interest Accrued	3,009,427.11	2,891,614.58	117,812.53
Loans and Bills Receivable	115,344.25	132,804.97	-17,460.72	Unmatured Rents Accrued	284,256.61	254,553.20	29,703.41
Traffic and Car Service				Other Current Liabilities	394,980.60	819,790.53	-424,809.93
Balances Receivable	565,465.86	1,831,838.05	-1,266,372.19	TOTAL	\$15,008,763.13	\$25,173,900.39	-\$10,165,137.26
Net Balance Receivable from Agents and Conductors	2,356,038.31	3,211,672.71	-855,634.40	<b>DEFERRED LIABILITIES:</b>			
Miscellaneous Accounts Receivable	464,814.26	158,031.99	306,782.27	U. S. Government Open Accounts		\$36,409,705.36	-\$36,409,705.36
Material and Supplies	11,221,087.11	14,543,515.00	-3,322,127.89	Other Deferred Liabilities	\$125,567.38	207,850.30	-82,282.92
Interest and Dividends Receivable	464,814.26	158,031.99	306,782.27	TOTAL	\$125,567.38	\$36,617,555.66	-\$36,491,988.28
Rents Receivable	37,350.00	33,750.00	3,600.00	<b>UNADJUSTED CREDITS:</b>			
Other Current Assets	242,535.29	355,356.53	-112,821.24	Tax Liability	\$2,607,238.57	\$1,889,994.51	\$717,244.06
TOTAL	\$22,727,702.97	\$36,189,289.60	-\$13,461,586.63	Insurance and Casualty Reserves	110,179.70	7,967.71	102,211.99
<b>DEFERRED ASSETS:</b>				Operating Reserves	2,836,113.73	3,806,154.00	-970,040.27
Working Fund Advances	\$256,128.81	\$257,962.63	-1,833.82	Accrued Depreciation			
U. S. Government Open Accounts		22,267,105.72	-22,267,105.72	Equipment	5,130,638.51	3,985,503.20	1,145,135.31
Other Deferred Assets	1.00	1.00		Other Unadjusted Credits	1,129,009.12	1,629,543.56	-500,534.44
TOTAL	\$256,129.81	\$22,525,069.35	-\$22,268,939.54	TOTAL	\$11,813,179.63	\$11,319,162.98	\$494,016.65
<b>UNADJUSTED DEBITS:</b>				<b>CORPORATE SURPLUS:</b>			
Rents and Insurance Premiums Paid in Advance	\$57,135.08	\$139,076.23	-81,941.15	Additions to Property through Income and Surplus	\$300,982.62	\$188,726.17	\$112,256.45
U. S. Railroad Administration, (Compensation)		11,612,729.76	-11,612,729.76	Profit and Loss	33,910,094.16	16,686,063.08	17,224,031.08
U. S. Govt. Guaranty under Transportation Act	5,027,909.88	6,155,828.92	-1,127,919.04	TOTAL	\$34,211,076.78	\$16,874,789.25	\$17,336,287.53
Other Unadjusted Debits	344,540.39	349,321.25	-4,780.86		\$459,246,166.92	\$488,377,888.28	-\$29,131,721.36
TOTAL	\$5,429,585.35	\$18,256,956.16	-\$12,827,370.81	<b>NOTE:</b>			
	\$459,246,166.92	\$488,377,888.28	-\$29,131,721.36	The following Capital Liabilities not included in Balance Sheet Accounts:			
				Funded Debt—Unpledged	\$5,501,000.00	\$3,501,500.00	\$2,000,000.00
				Funded Debt—Pledged	\$7,031,500.00	\$9,031,500.00	-\$2,000,000.00
				TOTAL	\$12,533,000.00	\$12,533,000.00	

NOTE: The following Securities not included in Balance Sheet Accounts:

Securities Issued or Assumed—Unpledged	\$5,501,500.00	\$3,501,500.00	\$2,000,000.00
Securities Issued or Assumed—Pledged	7,031,500.00	9,031,500.00	-2,000,000.00
TOTAL	\$12,533,000.00	\$12,533,000.00	

The Capital Liabilities shown above include the securities issued under the Reorganization Plan for bonds of various issues dealt with by the Plan, including \$1,687,500.00 principal amount, not acquired on December 31, 1921, which are accordingly not shown as Liabilities.

The company is guarantor jointly with other companies of the securities of certain terminal companies none of which are in default.



## GUARANTY PERIOD

Under the terms of Section 209 of the Transportation Act of 1920, guaranteeing one-half of the annual compensation of the Test Period for the six months, March 1 to August 31, 1920, \$12,583,000.00 has been advanced by the Government. Final settlement is expected during the present year of claim prepared under the formula prescribed in the Order of the Interstate Commerce Commission dated December 15, 1921.

## OPERATIONS

(Compared with previous year)

The Total Railway Operating Revenues for the year were \$109,745,072.51, a decrease of \$8,976,355.92 or 7.56%.

This decrease is attributable to the general depression in business.

The Total Operating Expenses were \$92,042,456.12, a decrease of \$21,277,483.75 or 18.78%, largely due to reduction in force, reduction in cost of materials and economies effected in both Maintenance and Operation. The average number of employees in service was 33,462, a reduction of 7,722 or 18.75%.

Net Revenue from Railway Operations was \$17,702,616.39, an increase of \$12,301,127.83.

The total number of tons of revenue freight handled decreased 6,914,855 tons or 20.36%, while the revenue ton miles decreased 20.05%.

The average revenue per ton mile was \$0.01270, as compared with \$0.01076.

The number of revenue passengers shows a decrease of 27.98%, while the number of passenger miles decreased 25.29%, with an increase of 1.81 miles in the average haul per passenger.

The average revenue per passenger mile was \$0.0344, as compared with \$0.0294.

## FEDERAL VALUATION

The federal valuation of the properties of your Company is to be made as of June 30, 1918. The Bureau of Valuation of the Interstate Commerce Commission has completed the inventory of the physical property of the Company and is now engaged in compiling and pricing same; it is expected that the tentative report will be completed and referred to us for review, before the close of the present year. The valuation department of your Company has worked in close co-operation with the Interstate Commerce Commission forces in completing the inventory and has done a large amount of work in anticipation of the receipt of the completed report in order that a prompt review may be made, as but thirty days are allowed for filing exceptions.

## PENSION SYSTEM

The Employees' Pension System has been in effect since July 1, 1917. During the operation of this system, 242 employees have been carried on the pension rolls; the number on the rolls at the present being 189, with an average monthly allowance of \$56.15 involving a monthly contribution of \$10,617.50.

## CAPITAL STOCK

No changes have been made in the Capital Stock during the year.

## FUNDED DEBT

Funded Debt outstanding in the hands of the public decreased \$304,900. During the year the Long Term Debt was increased by notes to the United States Government payable proportionately, January 15, 1922 to 1936, inclusive, amounting to \$1,200,000 and Equipment Trust Certificates, Series A, to the amount of \$1,836,000, a total of \$3,036,000 to cover the cost of fifty (50) locomotives. Equipment Gold Notes, Series 41, in an additional amount of \$181,500 were issued to complete the balance due on the equipment allocated in 1920 to the Company by the Director General of Railroads.

Note in favor of the United States Government maturing March 1, 1930 for \$3,000,000 was issued to cover a loan made by the Director General of Railroads on account of Additions and Betterments completed during the period of Federal Control, the Company having paid the Government in full for all such Additions and Betterments in the final settlement heretofore referred to.

Equipment Trust Certificates aggregating \$2,135,400 were paid and General Consolidated Railway and Land Grant Mortgage bonds to the principal amount of \$25,000 were purchased and retired during the year. Note representing a loan from the United States Government of \$4,362,000 matured November 1, 1921 and was paid.

First and Refunding Mortgage Bonds, Series D, to the principal amount of \$5,600,000 were pledged with the Government as security for the Notes above mentioned issued during the year and \$9,416,000 of the amount of the same issue of bonds were returned to the Company's Treasury by the retirement of notes heretofore issued to the Government. This resulted in increasing the amount of unpledged bonds of this Series in the Company's Treasury \$3,816,000 of which \$1,816,000 principal amount are carried as "Investment in Securities Issued, Assumed or Otherwise Carried as a Liability by the Accounting Company," and \$2,000,000 principal amount nominally issued.

## LOANS AND BILLS PAYABLE

Notes of the company in favor of the Government aggregating \$3,901,225 were returned and cancelled reducing this account to \$70,000, which is represented by a demand note covering surplus funds of the Missouri Pacific Hospital Association.

## NEW LINES

There were no new lines constructed during the year, and only changes of minor importance occurred in the operated mileage.

## ROAD AND EQUIPMENT

The following new equipment has been received and taken into the accounts during the year:

- 25 Mikado Type Locomotives,
- 5 Mountain Type Locomotives,
- 5 Pacific Type Locomotives,
- 15 Switch Locomotives,
- 10 Steel Passenger Coaches.

The details of charges to Road and Equipment are summarized as follows:

Road, .....	\$4,366,243.84
Equipment, .....	\$5,378,679.35
Less Equipment Retired, .....	913,391.95
General Expenditures, .....	1,279.91
Assets and Liabilities not appraised June 1, 1917, .....	52,348.58

Total Charges to Road and Equipment, .....

\$8,885,159.73

In the following pages the Corporate and Federal Accounts have been consolidated to afford ready comparison of results of the year covered by the report and with the previous year.

By Order of the Board of Directors,  
B. F. BUSH,  
President.

[ADVERTISEMENT]

## Railway Officers

## Executive

**Ross S. Marshall**, whose appointment as assistant to the president on the Chesapeake & Ohio and Hocking Valley with headquarters at Richmond, Va., was announced in the *Railway Age* of June 24, page 1761, was born at Rock Island, Ill., on March 15, 1880. He attended high school at Anaconda, Mont., and, in 1897, entered railway service as a clerk. From 1902 until 1915 he served as division accountant and chief clerk to division engineer of the Chicago, Rock Island & Pacific. He then went to Panama where he served as chief clerk to the general superintendent and as local auditor of the Panama Railroad. Returning to the United States two years later he became a statistician to the general superintendent, the general manager and vice-president in charge of operation of the New York, New Haven & Hartford. From 1911 to 1914 he served consecutively as assistant to the vice-president in charge of operation and as division superintendent of the Minneapolis & St. Louis. In 1914 he went with the Seaboard Air Line as superintendent with headquarters at Richmond, Va. He subsequently served this company as assistant general manager and as general superintendent. In 1918 he went with the United States Railroad Administration as statistician in the division of law, where he served until his appointment as assistant to the president of the Chesapeake & Ohio.

**W. M. Duncan**, president of the Wheeling & Lake Erie, whose election as chairman of the board of directors was announced in the *Railway Age* of July 8, page 91, was born at Pittsburgh, Pa., on May 19, 1873. He was admitted to the bar soon after his graduation from the school of law of Cornell University in 1894, and entered railway service in the same year as an attorney for the Cleveland, Akron & Canton. He served in this capacity until 1897 when he joined the law department of the Wheeling & Lake Erie where he remained until 1905, following which he served as general attorney of the Wabash-Pittsburgh Terminal Railway, the West Side Belt and the Wheeling



W. M. Duncan

& Lake Erie. He became general attorney for the receiver of the Wheeling & Lake Erie in 1908, which position he held until June 20, 1912, when he was appointed receiver of this road. At the close of the receivership on Jan. 1, 1917, Mr. Duncan was elected president of the reorganized company and has continued in this capacity until his recent election as chairman of the board.

## Financial, Legal and Accounting

**L. B. Williams**, treasurer of the New York, Chicago & St. Louis, with headquarters at Cleveland, O., has been appointed general treasurer of that road and of the Lake Erie & Western with the same headquarters.

## Operating

**H. J. Humphrey** has been appointed assistant general superintendent of the Ontario district of the Canadian Pacific with headquarters at Toronto. **H. J. Main** has been ap-

pointed superintendent of the Trenton division with headquarters at Toronto.

**F. N. Reynolds**, superintendent of the Indianapolis terminal of the Cleveland, Cincinnati, Chicago & St. Louis, has had his jurisdiction extended to include the Springfield division from Springfield, Ohio, to Indianapolis, Ind., with title of superintendent Springfield division and Indianapolis terminal.

**D. Coughlin**, general superintendent of the first district of the Chicago, Rock Island & Pacific with headquarters at Des Moines, Iowa, has been appointed acting manager of the district with the same headquarters, to succeed C. W. Jones granted leave of absence due to ill health. **A. T. Abbott**, division superintendent with headquarters at Des Moines, has been appointed acting general superintendent, to succeed Mr. Coughlin and he will be succeeded by **C. T. Ames**, train master at Des Moines who has been appointed acting superintendent. Mr. Ames will be succeeded by **F. A. Bogue**, trainmaster of the Chicago Terminal division, who has been appointed acting trainmaster, with headquarters at Des Moines.

**R. E. Brooks**, assistant superintendent of the Oregon Short Line, who has been promoted to superintendent of the Montana division effective June 25, was born at Bismark, Mo., February 5, 1885, and entered railway service in 1900 as a messenger with the Louisville & Nashville. He was employed by this road as messenger, telegraph operator, train dispatcher and chief dispatcher until April, 1910, when he entered the service of the Atchison, Topeka & Santa Fe as train dispatcher. He was employed as a dispatcher by the Denver & Rio Grande from September to December, 1911, and by the Union Pacific from December 15, 1911, to April 1, 1917. On June 15, 1917, he entered the service of the Oregon Short Line as dispatcher, later serving as chief dispatcher and assistant superintendent until the date of his recent promotion.

**W. M. Neal**, whose appointment as general superintendent of the Algoma district of the Canadian Pacific with headquarters at North Bay, Ont., was announced in the *Railway Age* of July 8, page 91, was born in June, 1886. On January 25, 1902, he entered the employ of the Canadian Pacific as a clerk for the Canadian Pacific in Toronto. In May, 1903, he became a stenographer and clerk in the general superintendent's office at Toronto. The following year he was transferred in a similar capacity to the office of the superintendent of transportation at Winnipeg. In January, 1908, he became chief clerk to the superintendent at Souris, Man. Two months later he became clerk to the general superintendent at Winnipeg. In June, 1910, he was promoted chief clerk of car service at Winnipeg and in May, 1915, was transferred in a similar capacity to Montreal. In January of the following year he was appointed car service agent of the Eastern division at Montreal. In April, 1916, he became acting superintendent of car service and, two months later, assistant superintendent of District No. 2, with headquarters at Montreal. The following month he again became acting superintendent of car service, and, a few days later, assistant superintendent of car service. In November of the same year he again became acting superintendent of car service and remained in that capacity until October, 1917, when he entered the service of the Canadian Railway Association for National Defense. In February, 1920, he was promoted to assistant general superintendent, which position he held on the Ontario district until his recent promotion.

### Traffic

**L. D. Knowles** has been appointed traffic manager of the Union Refrigerator Company, Milwaukee, Wis.

**C. B. Stovall**, has been appointed district freight agent of the Lake Erie & Western, with headquarters at Memphis, Tenn.

**G. W. Humphrey** has been appointed assistant general freight agent of the Bangor & Aroostook with headquarters at Bangor, Maine.

**A. E. Dove** has been appointed general agent of the passenger department of the Chicago, Rock Island & Pacific

with headquarters at Minneapolis, to succeed W. L. Hathaway, deceased.

**H. E. Shepard** has been appointed commercial agent of the Atlantic Coast Line with headquarters at Jacksonville, Fla., effective July 10.

**R. G. Hyatt**, formerly traffic manager of the Waco (Texas) Chamber of Commerce, has been appointed manager of the Texas Freight Traffic Association.

**H. L. Pigott**, traveling passenger agent of the Wabash with headquarters at Kansas City, Mo., has been promoted to division passenger agent, with headquarters at Ft. Wayne, Ind., succeeding G. D. Maxfield, deceased.

**J. L. Bennett**, travelling freight agent of the Chicago, Rock Island & Pacific with headquarters at Minneapolis, Minn., has been appointed commercial agent with the same headquarters, succeeding C. H. Bacon, retired.

**Stuart C. Leake** has been appointed general agent of the Richmond, Fredericksburg & Potomac, **William E. Phaup**, commercial agent, and **Edward W. Weeks**, commercial agent, all with headquarters at Richmond, Va.

### Mechanical

**J. E. Osmer** has been appointed superintendent of motive power of the Denver & Salt Lake with headquarters at Denver, Colo.

### Engineering, Maintenance of Way and Signaling

**W. P. Wiltsee** has been appointed principal assistant engineer of the Norfolk & Western with headquarters at Roanoke, Va., effective July 1.

### Obituary

**W. H. Biggar**, vice-president and general counsel of the Grand Trunk, died suddenly at Toronto on July 7.

**David Meriwether, Jr.**, regional engineer of the United States Railroad Administration at Washington, D. C., and formerly assistant chief engineer of the Southern Railway, died at Washington on June 21. He had been connected with the Southern since 1901 and became regional engineer for the Railroad Administration in March 1, 1920.

**J. H. Manter**, assistant freight traffic manager of the Atchison, Topeka & Santa Fe, died at Chicago on July 5 after a long illness. Mr. Manter was born at Murphysboro, Ill., on May 14, 1865, and entered railway service as a telegraph operator on the St. Louis, Iron Mountain & Southern in 1883, which position he held until 1885 when he left to become a telegraph operator on the Minneapolis & St. Louis. He later became a clerk in the general freight office of the same road and in 1886 he entered the service of the Minnesota & North Western as a chief clerk to the general agent at Minneapolis. From April, 1887, until August of that year he was a train dispatcher of the same road at St. Paul, Minn., and in August, 1887, he was transferred to Chicago as chief clerk to the general agent. From April, 1889, to September, 1890, he was chief clerk for the general agent of the Atchison, Topeka & Santa Fe at Chicago and from September, 1890, to February, 1891, he was contracting freight agent with the same headquarters. In February, 1891, he was promoted to commercial agent with headquarters at Peoria, Ill., which position he held until October, 1895, when he was transferred to Kansas City, Mo. On January 1, 1897, he was promoted to general agent with headquarters at Chicago, and he held this position until March 1, 1903, when he was promoted to assistant general freight agent with the same headquarters. On March 1, 1920, he was promoted to assistant freight traffic manager, which position he was holding at the time of his death.

**FORCE OF HABIT.**—(From a recent train bulletin). "Nos. 10 and 1 on time; cause unknown."